EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
<th>THIS GRID</th>
<th>OTHER GRIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A1-A2</td>
<td>80'</td>
<td>-</td>
<td>-</td>
<td>1500W MZ</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>B1-B2</td>
<td>90'</td>
<td>-</td>
<td>-</td>
<td>1500W MZ</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>C1-C2</td>
<td>D1-D2</td>
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<td>-</td>
<td>1500W MZ</td>
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<td>0</td>
</tr>
</tbody>
</table>

Pole location(s) dimensions are relative to 0,0 reference point(s)

MY PROJECT
Name: Central Maui Regional Park Ball Fields
Phase 1
Location: Kahului, HI

GRID SUMMARY
Name: Baseball
Size: 325'/400'/325' - basepath 90'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION
SUMMARY HORIZONTAL FOOTCANDLES
In Field Output
Guaranteed Average: 50 30
Scan Average: 50.27 31.16
Maximum: 63 45
Minimum: 38 19
Avg / Min: 1.31 1.67
Guaranteed Max / Min: 2 2.5
Max / Min: 1.65 2.42
UG (adjacent pts): 1.22 1.69
CU: 0.64
No. of Points: 25 119

LUMINAIRE INFORMATION
Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 52
Avg KW: 81.33  (88.4 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the lifespan of the lamps.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE Ltd. Individual values may vary from the Guaranteed due to variations in location.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/-3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of feeding locations.
ILLUMINATION SUMMARY

ENGINEERED DESIGN
By: Sarah Ross
File # / Date: 163382R2 17-Apr-14

EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING</th>
<th>HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A3-A4</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W</td>
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</tr>
<tr>
<td>2</td>
<td>B3-B4</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>C3-C4</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

TOTALS: 34

MY PROJECT
Name: Central Maui Regional Park Ball Fields
Phase 1
Location: Kahului, HI

GRID SUMMARY
Name: Ōahu ball 1
Size: 300'/300'/300' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION
SUMMARY HORIZONTAL FOOTCANDLES
In-field Ouñield
Guaranteed Average: 50 30
Scan Average: 50.46 31.56
Maximum: 60 48
Minimum: 39 20
Avg / Min: 1.28 1.58
Guaranteed Max / Min: 2 2.5
Max / Min: 1.54 2.40
UG (adjacent pts): 1.11 1.48
CU: 0.61
No. of Points: 25 181

GUARANTEED PERFORMAÑCE: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

FIELD MEASUREMENTS: Individual values may vary. See the Warranty document for details.

ELECTRICAL SYSTEM REQUIREMENTS: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

INSTALLATION REQUIREMENTS: Results assume +/- 3% nominal voltage at the site of the ballast and structures located within 3 feet (1m) of design locations.

LUMINAIRE INFORMATION
Luminaire Type: Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 34
Avg KW: 53.18  (57.8 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

FIELD MEASUREMENTS: Individual values may vary. See the Warranty document for details.

ELECTRICAL SYSTEM REQUIREMENTS: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

INSTALLATION REQUIREMENTS: Results assume +/- 3% nominal voltage at the site of the ballast and structures located within 3 feet (1m) of design locations.

LUMINAIRE INFORMATION
Luminaire Type: Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 34
Avg KW: 53.18  (57.8 max)
### Equipment List for Areas Shown

<table>
<thead>
<tr>
<th>Pole Luminaires</th>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
<th>THIS GRID</th>
<th>OTHER GRIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>S1-S2</td>
<td>70'</td>
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<td>70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>S3-S4</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
<td>5/5*</td>
<td>5</td>
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### Total

<table>
<thead>
<tr>
<th>QTY</th>
<th>30</th>
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<tbody>
<tr>
<td>20</td>
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<tr>
<td>10</td>
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</tr>
</tbody>
</table>

*This structure utilizes a back-to-back mounting configuration.*

### GRID SUMMARY

**Name:** Soccer 1

- **Size:** 300' x 180'
- **Spacing:** 30.0' x 30.0'
- **Height:** 3.0' above grade

### CONSTANT ILLUMINATION

**SUMMARY HORIZONTAL FOOTCANDLES**

- **Guaranteed Average:** 30
- **Scan Average:** 30.33
- **Maximum:** 35
- **Minimum:** 26
- **Avg / Min:** 1.15

**Guaranteed Max / Min:** 2.5

**Max / Min:** 1.33

**UG (adjacent pts):** 1.22

**CU:** 0.61

**No. of Points:** 60

### Luminaire Information

- **Luminaire Type:** Green Generation
- **Rated Lamp Life:** 5,000 hours
- **Design Lumens:** 134,000
- **Avg Lamp Tilt Factor:** 1.000
- **No. of Luminaires:** 20
- **Avg KW:** 31.28 (34.0 max)

### Guaranteed Performance

The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp. Field measurements taken in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed Average for the Guaranteed Life. See the Warranty document for details.

### Electrical System Requirements

Refer to Amperage Draw Chart or the "Musco Control System Summary" for electrical sizing.

### Installation Requirements

Results assume +/- 3% nominal voltage at the line side of the ballast and structures located within 3 feet (1m) of design locations.
ILLUMINATION SUMMARY

ENGINEERED DESIGN
By: Sarah Ross
File # / Date: 163382R2 17-Apr-14

Constant Illumination Summary Horizontal Footcandles

<table>
<thead>
<tr>
<th>Area</th>
<th>Pole Location(s)</th>
<th>Dimensions are relative to 0,0 reference point(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A11-A12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
</tr>
<tr>
<td>B11-B12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
</tr>
<tr>
<td>C11-C12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
</tr>
</tbody>
</table>

Pole luminaires

EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
<th>THIS GRID OTHER GRIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A11-A12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>B11-B12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>C11-C12</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 20

Luminaire Information

Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 20
Avg KW: 31.28 (34.0 max)

Guaranteed Performance:
The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.
Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary during lighting design for details.
Electrical System Requirements: Refer to Amperage Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results may vary +/- 3% nominal voltage at the side of the ballast and structures located within 3 feet (1m) of design locations.

Scan Average: 52.21 31.76
Maximum: 62 43
Minimum: 42 20
Avg / Min: 1.25 1.56
Guaranteed Max / Min: 2 2.5
Max / Min: 1.50 2.11
UG (adjacent pts): 1.27 1.38
CU: 0.59
No. of Points: 25 84

Electrical System Requirements:
EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
<th>THIS GRID</th>
<th>OTHER GRIDS</th>
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<tbody>
<tr>
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<tr>
<td>2</td>
<td>B15-B16</td>
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<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
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<td>5</td>
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</tr>
<tr>
<td>2</td>
<td>C15-C16</td>
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<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
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</tbody>
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Pole location(s) dimensions are relative to 0,0 reference point(s).

Central Maui Regional Park Ball Field
Phase 1
Location: Kahului, HI

GRID SUMMARY

Name: Southern Ball 7
Size: 200'/225'/200' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

Guaranteed Average: 50 30
Scan Average: 52.38 32.03
Maximum: 62 46
Minimum: 43 21
Avg / Min: 1.22 1.56
Guaranteed Max / Min: 2 2.5
Max / Min: 1.44 2.24
UG (adjacent pts): 1.27 1.40
CU: 0.60
No. of Points: 25 84

LUMINAIRE INFORMATION

Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 20

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp. Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE 1994. Individual values may vary from the Guaranteed Average. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at the site of the ballast and structures located within 3 feet (1m) of design locations.
**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING</th>
<th>HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
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<td>1500W MZ</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>S9-S10</td>
<td>70'</td>
<td>-</td>
<td>1500W MZ</td>
<td>5/5*</td>
<td>5</td>
<td>5</td>
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<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**4 TOTALS**

* This structure utilizes a back-to-back mounting configuration.

**MY PROJECT**

**Name:** Central Maui Regional Park Fields

**Phase 1**

**Location:** Kahului, HI

**GRID SUMMARY**

**Name:** Soccer 3

**Size:** 300' x 180'

**Spacing:** 30.0' x 30.0'

**Height:** 3.0' above grade

**CONSTANT ILLUMINATION**

**HORIZONTAL FOOTCANDLES**

**Guaranteed Average:** 30

**Scan Average:** 30.33

**Maximum:** 35

**Minimum:** 26

**Avg / Min:** 1.15

**Guaranteed Max / Min:** 2.5

**Max / Min:** 1.33

**UG (adjacent pts):** 1.22

**CU:** 0.61

**No. of Points:** 60

**LUMINAIRE INFORMATION**

**Luminaire Type:** Green Generation

**Rated Lamp Life:** 5,000 hours

**Design Lumens:** 134,000

**Avg Lamp Tilt Factor:** 1.000

**No. of Luminaires:** 20

**Avg KW:** 31.28  (34.0 max)

**Guaranteed Performance:** The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed average for locations.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at the line side of the ballast and no structures located within 3 feet (1 m) of design locations.
**ILLUMINATION SUMMARY**

By: Sarah Ross
File # / Date: 163382R2 17-Apr-14

**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>#</th>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
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<tbody>
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<td>2</td>
<td>A5-A6</td>
<td>70' - 70'</td>
<td>1500W MZ</td>
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<td>0</td>
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<td>32</td>
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</tr>
</tbody>
</table>

**PROJECT NAME:** Central Maui Regional Park Ball Field 1

**LOCATION:** Kahului, HI

**GRID SUMMARY**

- **Name:** Soʻo Ball 2
- **Size:** 300’/300’/300’ - basepath 60’
- **Spacing:** 20.0’ x 20.0’
- **Height:** 3.0’ above grade

**CONSTANT ILLUMINATION**

- **Guaranteed Average:** 50 30
- **Scan Average:** 51.83 30.19
- **Maximum:** 66 45
- **Minimum:** 39 19
- **Avg / Min:** 1.32 1.62

**Guaranteed Max / Min:** 2 2.5

**UG (adjacent pts):** 1.18 1.51

**CU:** 0.63

**LUMINAIRE INFORMATION**

- **Luminaire Type:** Green Generation
- **Rated Lamp Life:** 5,000 hours
- **Design Lumens:** 134,000
- **Avg Lamp Tilt Factor:** 1.000
- **No. of Luminaires:** 32

**Guaranteed Performance:** The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed Average as described for electrical sizing.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.
ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
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</thead>
<tbody>
<tr>
<td>A9-A10</td>
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<td>4</td>
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<td>B9-B10</td>
<td>70'</td>
<td>-70'</td>
<td>1500W MZ</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>C9-C10</td>
<td>70'</td>
<td>-70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

TOTALS

32

Pole location(s) dimensions are relative to 0,0 reference point(s)

MY PROJECT
Name: Central Maui Regional Park Ballfields
Phase 1
Location: Kahului, HI

GRID SUMMARY
Name: Codeball 4
Size: 300'/300'/300' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION
Guaranteed Average: 50 30
Scan Average: 50.57 30.63
Maximum: 65 43
Minimum: 38 18
Avg / Min: 1.31 1.73
Guaranteed Max / Min: 2 2.5
Max / Min: 1.69 2.42
UG (adjacent pts): 1.18 1.57
CU: 0.64
No. of Points: 25 181

LUMINAIRE INFORMATION
Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 32
Avg KW: 50.05  (54.4 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE Ltd. Individual values may vary from the Guaranteed Average.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at the line side of the ballast and structures located within 3 feet (1m) of design locations.
ILLUMINATION SUMMARY

ENGINEERED DESIGN
By: Sarah Ross
File # / Date: 163382R2 17-Apr-14

EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>Pole Location(s)</th>
<th>Dimensions are relative to 0,0 reference point(s)</th>
</tr>
</thead>
</table>

MY PROJECT
Name: Central Maui Regional Park Fields
Phase 1
Location: Kahului, HI

GRID SUMMARY
Name: Field 1
Size: 300' x 300' x 300' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION SUMMARY HORIZONTAL FOOTCANDLES

Guaranteed Average: 50 30
Scan Average: 51.48 30.21
Maximum: 66 43
Minimum: 38 19
Avg / Min: 1.35 1.62
Guaranteed Max / Min: 2 2.5
Max / Min: 1.74 2.33
UG (adjacent pts): 1.16 1.67
CU: 0.63
No. of Points: 25 181

LUMINAIRE INFORMATION
Luminaire Type: Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 32
Avg KW: 50.05  (54.4 max)

Guaranteed Performance:
The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements:
Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed values due to site conditions.

Electrical System Requirements:
Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements:
Results assume +/- 3% nominal voltage at the line side of the ballast and structures located within 3 feet (1m) of design locations.

Scale in Feet 1:30
**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>QTY</th>
<th>SCALE IN FEET 1 : 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A13-A14</td>
<td>2</td>
<td>70' - 70'</td>
</tr>
<tr>
<td>B13-B14</td>
<td>2</td>
<td>70' - 70'</td>
</tr>
<tr>
<td>C13-C14</td>
<td>2</td>
<td>70' - 70'</td>
</tr>
</tbody>
</table>

**TOTALS**

| QTY | 24  |

---

**Pole location(s) dimensions are relative to 0,0 reference point(s)**

**MY PROJECT**

**Name:** Central Maui Regional Park Ball fields

**Phase 1**

**Location:** Kahului, HI

**GRID SUMMARY**

**Name:** So...ball 6

**Size:** 225'/275'/225' - basepath 60'

**Spacing:** 20.0' x 20.0'

**Height:** 3.0' above grade

---

**CONSTANT ILLUMINATION SUMMARY HORIZONTAL FOOTCANDLES**

**Guaranteed Average:**

- 50
- 30

**Scan Average:**

- 50.42
- 30.14

**Maximum:**

- 63
- 43

**Minimum:**

- 39
- 20

**Avg / Min:**

- 1.30
- 1.53

**Guaranteed Max / Min:**

- 2
- 2.5

**Max / Min:**

- 1.62
- 2.19

**UG (adjacent pts):**

- 1.28
- 1.53

**CU:**

- 0.63

**No. of Points:**

- 25
- 126

---

**LUMINAIRE INFORMATION**

**Luminaire Type:** Green Generation

**Rated Lamp Life:** 5,000 hours

**Design Lumens:** 134,000

**Avg Lamp Tilt Factor:** 1.000

**No. of Luminaires:** 24

**Avg KW:**

- 37.54
- 40.8 max

---

**Guaranteed Performance:**

The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements:

- Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed Average described above.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.
EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A17-A18</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>B17-B18</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>C17-C18</td>
<td>70'</td>
<td>-</td>
<td>70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>TOTALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Pole location dimensions are relative to 0,0 reference point(s)

GRID SUMMARY

<table>
<thead>
<tr>
<th>Name: Central Maui Regional Park</th>
<th>Location: Kahului, HI</th>
</tr>
</thead>
<tbody>
<tr>
<td>END OF DESIGN REFERENCE POINTS</td>
<td></td>
</tr>
</tbody>
</table>

CONSTANT ILLUMINATION

Constant Illumination: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Constant Illumination: Guaranteed Average:
- Average: 50, 30
- Scan Average: 50.56, 30.23
- Maximum: 62, 43
- Minimum: 38, 18
- Avg / Min: 1.34, 1.65

Guaranteed Max / Min:
- Max / Min: 2, 2.5
- Max / Min: 1.64, 2.36

UG (adjacent pts): 1.28, 1.53
CU: 0.65
No. of Points: 25, 173

LUMINAIRE INFORMATION

Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 30
 Avg KW: 46.92 (51.0 max)

Guaranteed Performance:
The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary from the Guaranteed Average described above.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at the side of the ballast and structures located within 3 feet (1m) of design locations.
### ILLUMINATION SUMMARY

#### Phase 1

- **Avg Lamp Tilt Factor**: 1.000
- **UG (adjacent pts)**: 28.83
- **No. of Points**: 2988

#### Engineering Notes

- **Note**: Please refer to the original document for detailed information. This is a summary for quick reference. Note: Additional details may exist in the full document.

---

### TABLE 1: EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>Area</th>
<th>Equipment</th>
<th>Model</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A11-A12</td>
<td>Poles</td>
<td>G100</td>
<td>5</td>
</tr>
<tr>
<td>C13-C14</td>
<td>Lamps</td>
<td>M100</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Scale Information

- **Scale**: 1:200
- **Lot 12-A-5**: 80'

---

#### Location

- **ELEVATION**: Lot 12-A-5
- **SIZE**: Lot 12-A-5

---

#### Other

- **Guaranteed Performance**: The LUMAPRO ILLUMINATION described above is guaranteed for the duration of the lens.
- **Field Measurements**: Measurements made in accordance with UL904 and UL903, individual lamp values may vary from the values shown in this document.
- **Electrical System Requirements**: Refer to equipment manufacturer's electrical system requirements.
- **Installation Requirements**: Refer to manufacturer's installation instructions.

---

**Note**: This summary is intended for quick reference. For detailed information, please refer to the full document.
**EQUIPMENT LIST FOR AREAS SHOWN**

<table>
<thead>
<tr>
<th>Area</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GEO SUMMARY**
- **Project Name:** Central Maui Regional Park Ballfields
- **Phase:** Phase 1
- **Location:** 127 acres, Maui
- **Scale in Feet:** 1:200

**CONSTANT ILLUMINATION**
- **Field Measurements:**
  - **Date:** Apr 14
  - **Average Illumination:**
    - **Luminaires:** 106
    - **Luminaire Type:** Green Generation
    - **Design Lumens:** 134,000
    - **Spacing:** 50.0' x 50.0'
    - **Name:** Central Maui Regional Park Ballfields
    - **Location:** 127 acres, Maui

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the service life of the lamps.

**Field Measurements:** Illumination measured in accordance with R100-00 and CRE0-12. Individual values may vary.

**Draw Chart and/or the Illumination measured in accordance with R100-00 and CRE0-12. Individual values may vary.**

**No. of Measurements:**
- **Field Measurements:** 106
- **Average Illumination:**
  - **Luminaire Type:** Green Generation
  - **Design Lumens:** 134,000
  - **Spacing:** 50.0' x 50.0'
  - **Name:** Central Maui Regional Park Ballfields
  - **Location:** 127 acres, Maui

**Draw Chart and/or the Illumination measured in accordance with R100-00 and CRE0-12. Individual values may vary.**

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the service life of the lamps.

**Field Measurements:** Illumination measured in accordance with R100-00 and CRE0-12. Individual values may vary.

**Draw Chart and/or the Illumination measured in accordance with R100-00 and CRE0-12. Individual values may vary.**
## Equipment List for Areas Shown

<table>
<thead>
<tr>
<th>Area</th>
<th>Section</th>
<th>Footprint</th>
<th>Equipment</th>
<th>QTY</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3-A10</td>
<td>B3-B4</td>
<td>200' x 200'</td>
<td>Lights</td>
<td>8</td>
<td>3.79</td>
</tr>
<tr>
<td>A11-A12</td>
<td>B5-B10</td>
<td>200' x 200'</td>
<td>Lights</td>
<td>4</td>
<td>2.84</td>
</tr>
<tr>
<td>A13-A14</td>
<td>B11-B15</td>
<td>200' x 200'</td>
<td>Lights</td>
<td>8</td>
<td>1.59</td>
</tr>
<tr>
<td>A15-A16</td>
<td>B16-B20</td>
<td>200' x 200'</td>
<td>Lights</td>
<td>4</td>
<td>0.42</td>
</tr>
<tr>
<td>A17-A18</td>
<td>B21-B25</td>
<td>200' x 200'</td>
<td>Lights</td>
<td>8</td>
<td>0.11</td>
</tr>
</tbody>
</table>

### Grid Summary
- **Location:** Central Maui Regional Park Ballfield
- **Spacing:** 30.0'
- **Height:** 3.0' above grade
- **No. of Luminaires:** 336
- **Lamp Type:** Sports Lighting
- **Rated Life:** 5,000 hours
- **Design Lumen:** 134,000
- **Maximum KW:** 525.5

### Guaranteed Performance
- The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

### Field Measurements
- Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

### Electrical System Requirements
- Refer to Amperage from Chart and/or the "Musco Control System Summary" for electrical sizing.

### Installation Requirements
- Results assume +/- 3% nominal voltage at the side of the ballast and structures located within 3 feet (1m) of design locations.

## IESNA LM-5-04 and CIBSE LG4
- Individual values may vary.

## Design Lumens
- See the Warranty document for details.

### Illusion Measurement
- According to IESNA LM-5-04 and CIBSE LG4, individual values may vary.

### Guaranteed Performance
- The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

### Field Measurements
- Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

### Electrical System Requirements
- Refer to Amperage from Chart and/or the "Musco Control System Summary" for electrical sizing.

### Installation Requirements
- Results assume +/- 3% nominal voltage at the side of the ballast and structures located within 3 feet (1m) of design locations.
EQUIPMENT LAYOUT

INCLUDES:
- Baseball
- Soccer 1
- Soccer 2
- Soccer 3
- Softball 1
- Softball 2
- Softball 3
- Softball 4
- Softball 5
- Softball 6
- Softball 7
- Softball 8

EQUIPMENT LIST FOR AREAS SHOWN

<table>
<thead>
<tr>
<th>QTY</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>GRADE</th>
<th>ELEVATION</th>
<th>MOUNTING HEIGHT</th>
<th>LAMP TYPE</th>
<th>QTY / POLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A1-A2</td>
<td>80'</td>
<td>500'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>A3-A10</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>A11-A12</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>A13-A14</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A15-A16</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>B1-B2</td>
<td>90'</td>
<td>90'</td>
<td>90'</td>
<td>1500W MZ</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>B3-B4</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>B11-B16</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>B17-B18</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>B5-B10</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>C1-C2</td>
<td>80'</td>
<td>80'</td>
<td>80'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>D1-D2</td>
<td>80'</td>
<td>80'</td>
<td>80'</td>
<td>1500W MZ</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>S3-S4</td>
<td>70'</td>
<td>70'</td>
<td>70'</td>
<td>1500W MZ</td>
<td>5/5*</td>
<td>5</td>
</tr>
</tbody>
</table>

* This structure utilizes a back-to-back mounting configuration.

SINGLE LUMINAIRE AMPERAGE DRAW CHART

<table>
<thead>
<tr>
<th>Voltage (Volts)</th>
<th>Single Phase Line Amperage Per Luminaire (max draw)</th>
</tr>
</thead>
<tbody>
<tr>
<td>208 (60)</td>
<td>1.86</td>
</tr>
<tr>
<td>220 (60)</td>
<td>2.05</td>
</tr>
<tr>
<td>240 (60)</td>
<td>2.25</td>
</tr>
<tr>
<td>277 (60)</td>
<td>3.10</td>
</tr>
<tr>
<td>347 (60)</td>
<td>4.05</td>
</tr>
<tr>
<td>380 (60)</td>
<td>4.45</td>
</tr>
<tr>
<td>480 (60)</td>
<td>5.85</td>
</tr>
</tbody>
</table>