

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P227105

Luminaire Tested: **IST-AF-XXX-LED-E1-SL4-8030-XXB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227105
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35947)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: IST-AF-XXX-LED-E1-SL4-8030-XXB
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE, EMERGENCY MODE WITH BATTERY
BACKPACK BOX
LIGHT SQUARE WITH ACCUED OPTICS-TYPE IV W/SPILL CONTROL
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 485 lumens
Efficiency: N/A
Efficacy: 37.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U1 - G0

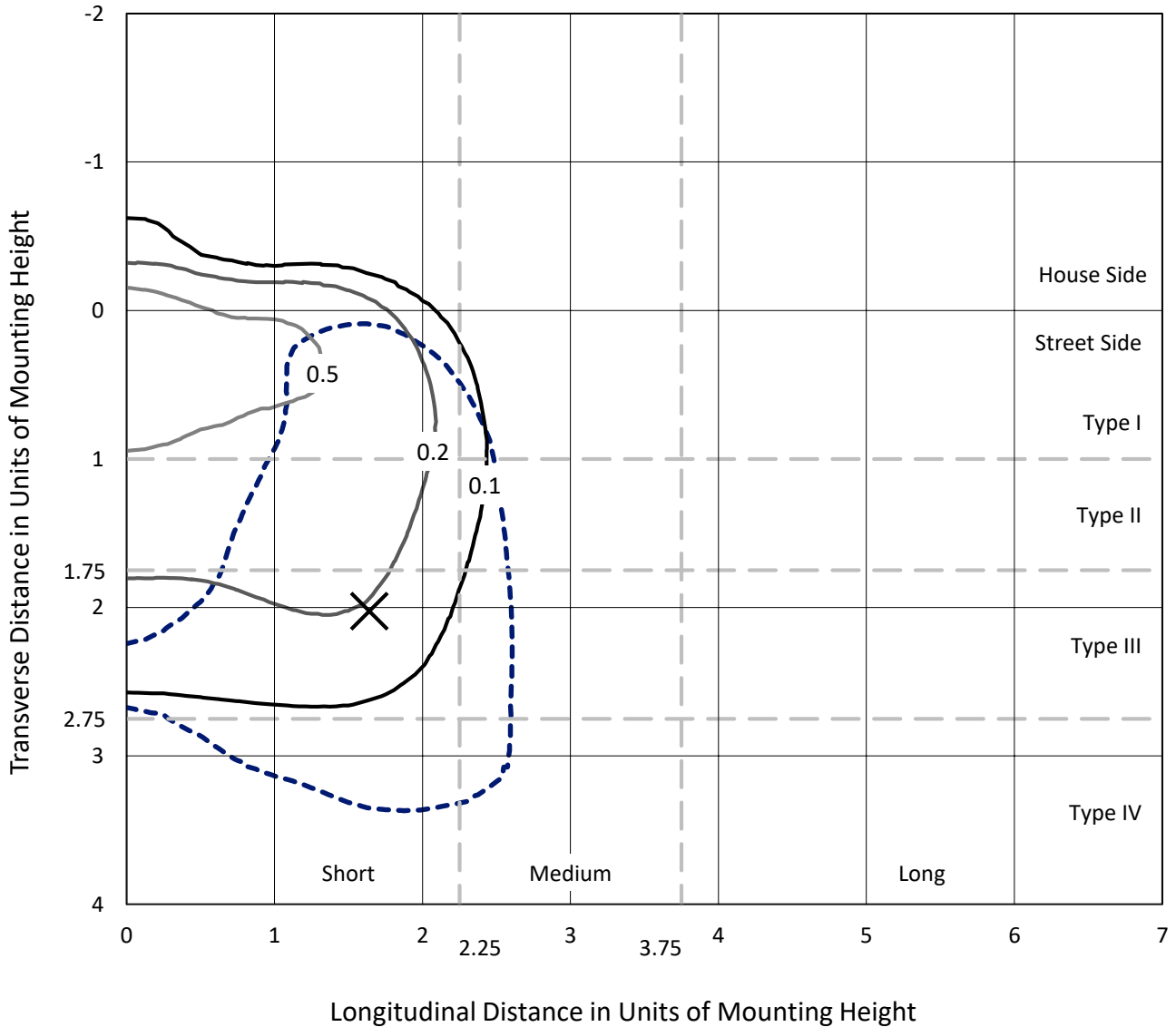
Input Watts (W): 13
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

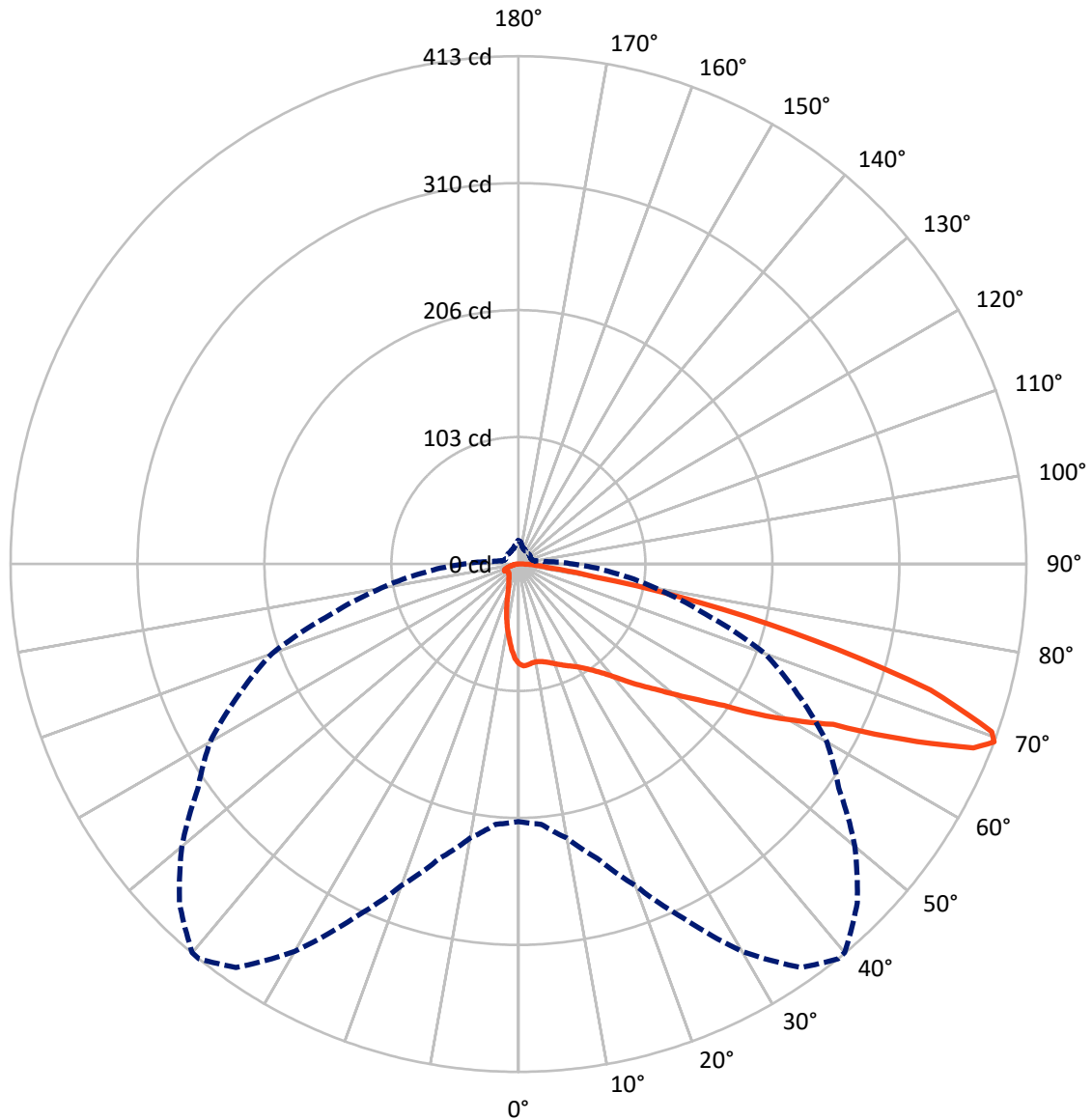
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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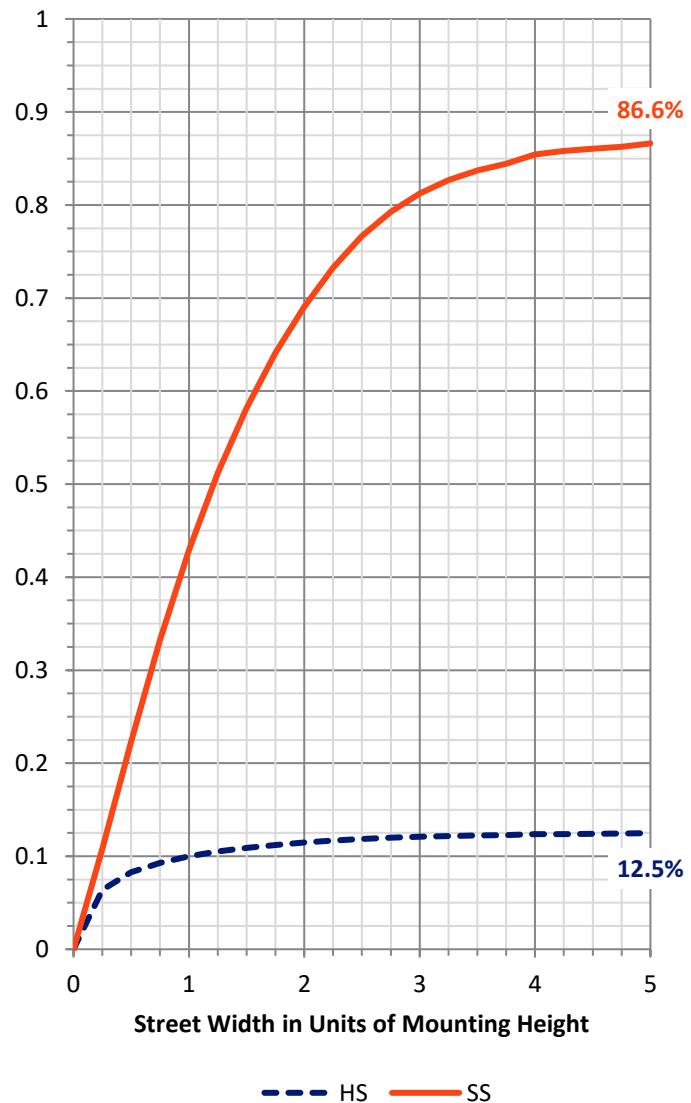
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| House Side | Lumens | 61.4 | 0.0 | 61.4 |
| | % Fixture | 12.7 | 0.0 | 12.7 |
| Street Side | Lumens | 423.5 | 0.1 | 423.6 |
| | % Fixture | 87.3 | 0.0 | 87.3 |
| Total | Lumens | 484.8 | 0.1 | 485.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 7.0 | 1.4 |
| 10°-20° | 17.7 | 3.6 |
| 20°-30° | 27.5 | 5.7 |
| 30°-40° | 41.6 | 8.6 |
| 40°-50° | 66.5 | 13.7 |
| 50°-60° | 104.6 | 21.6 |
| 60°-70° | 140.8 | 29.0 |
| 70°-80° | 69.9 | 14.4 |
| 80°-90° | 9.2 | 1.9 |
| 90°-100° | 0.1 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 484.8 | 100.0 |
| 0°-180° | 485.0 | 100.0 |



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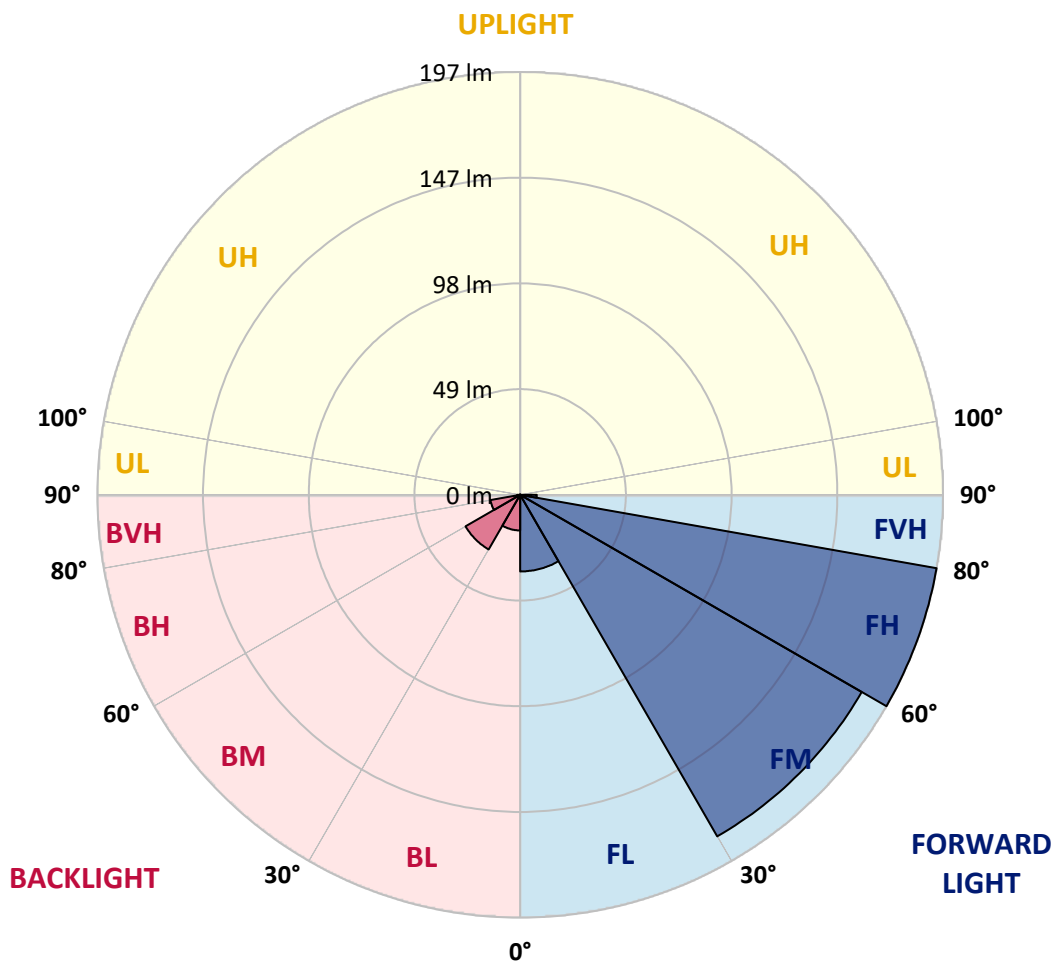
CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|-------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 35.7 | 7.4 | | | |
| FM | (30°-60°) | 183.4 | 37.8 | | | |
| FH | (60°-80°) | 196.7 | 40.6 | | | G0/660 |
| FVH | (80°-90°) | 7.7 | 1.6 | | | G0/10 |
| BL | (0°-30°) | 16.6 | 3.4 | B0/110 | | |
| BM | (30°-60°) | 29.3 | 6.0 | B0/220 | | |
| BH | (60°-80°) | 14.0 | 2.9 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.4 | 0.3 | | | G0/10 |
| UL | (90°-100°) | 0.1 | 0.0 | | U1/10 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U1/10 | |

BUG Rating: B0-U1-G0

Type IV Short





REPORT NUMBER: P227105

CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 39° | 40° | 45° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 |
| 2.5° | 83.2 | 83.3 | 83.3 | 83.4 | 83.0 | 83.0 | 83.1 | 82.8 | 83.0 | 82.9 | 82.5 |
| 5° | 83.4 | 83.4 | 83.4 | 83.4 | 83.0 | 82.9 | 82.6 | 82.2 | 82.3 | 82.2 | 81.7 |
| 7.5° | 83.0 | 83.0 | 82.9 | 83.0 | 82.5 | 82.2 | 81.7 | 81.4 | 81.1 | 81.1 | 80.4 |
| 10° | 82.1 | 82.3 | 82.0 | 82.2 | 81.9 | 81.5 | 81.3 | 81.0 | 80.8 | 80.8 | 80.0 |
| 12.5° | 80.8 | 81.0 | 81.1 | 81.4 | 81.4 | 81.5 | 81.5 | 81.2 | 81.3 | 81.2 | 80.6 |
| 15° | 79.7 | 80.2 | 80.8 | 81.1 | 81.7 | 82.1 | 82.4 | 82.3 | 82.6 | 82.5 | 82.1 |
| 17.5° | 79.7 | 80.1 | 81.1 | 82.1 | 83.3 | 83.8 | 84.3 | 84.3 | 84.4 | 84.2 | 83.6 |
| 20° | 80.0 | 80.8 | 82.4 | 84.1 | 85.6 | 86.7 | 87.0 | 86.9 | 86.6 | 86.6 | 85.5 |
| 22.5° | 82.6 | 83.1 | 84.8 | 86.7 | 88.7 | 89.8 | 89.9 | 89.6 | 89.0 | 88.9 | 87.5 |
| 25° | 86.3 | 86.9 | 88.5 | 90.9 | 92.4 | 93.3 | 93.0 | 92.2 | 91.6 | 91.1 | 89.6 |
| 27.5° | 92.0 | 92.5 | 94.1 | 95.7 | 96.6 | 96.9 | 95.9 | 94.8 | 94.1 | 93.9 | 92.0 |
| 30° | 97.9 | 98.5 | 99.8 | 100.8 | 101.5 | 100.6 | 99.1 | 97.8 | 97.2 | 97.0 | 95.3 |
| 32.5° | 105.2 | 105.2 | 106.1 | 106.3 | 106.4 | 104.8 | 102.8 | 101.6 | 101.4 | 101.1 | 99.7 |
| 35° | 111.8 | 112.2 | 112.0 | 111.9 | 111.2 | 109.2 | 107.5 | 106.8 | 106.6 | 106.5 | 105.4 |
| 37.5° | 117.7 | 118.3 | 117.9 | 117.2 | 116.3 | 114.8 | 112.9 | 112.2 | 112.9 | 112.5 | 112.7 |
| 40° | 123.4 | 123.4 | 122.9 | 122.5 | 121.5 | 120.0 | 119.4 | 119.5 | 120.7 | 121.1 | 121.4 |
| 42.5° | 128.4 | 128.3 | 127.8 | 127.5 | 127.3 | 127.0 | 126.7 | 128.2 | 130.7 | 131.1 | 131.8 |
| 45° | 133.8 | 133.7 | 131.9 | 132.5 | 133.6 | 133.9 | 135.0 | 138.4 | 141.4 | 141.7 | 143.2 |
| 47.5° | 139.1 | 138.4 | 136.7 | 137.3 | 140.5 | 142.1 | 144.0 | 148.8 | 153.0 | 153.9 | 158.0 |
| 50° | 144.6 | 144.0 | 142.1 | 143.2 | 147.7 | 150.7 | 155.0 | 161.7 | 167.5 | 168.7 | 174.1 |
| 52.5° | 150.3 | 150.3 | 148.8 | 150.6 | 156.0 | 162.2 | 168.9 | 176.5 | 183.5 | 185.0 | 193.1 |
| 55° | 157.3 | 156.9 | 156.2 | 158.4 | 166.1 | 174.5 | 185.0 | 195.3 | 203.0 | 205.7 | 213.8 |
| 57.5° | 165.0 | 164.9 | 165.0 | 169.5 | 178.8 | 191.5 | 204.3 | 218.3 | 230.9 | 232.8 | 240.4 |
| 60° | 171.8 | 172.1 | 173.9 | 181.1 | 192.8 | 209.9 | 227.9 | 246.9 | 258.1 | 260.0 | 267.4 |
| 62.5° | 180.1 | 181.9 | 185.9 | 195.0 | 208.7 | 229.4 | 252.8 | 272.9 | 287.3 | 291.3 | 305.3 |
| 65° | 199.9 | 201.3 | 208.8 | 219.7 | 237.2 | 263.8 | 290.7 | 319.9 | 343.6 | 347.3 | 359.3 |
| 67.5° | 214.4 | 218.0 | 229.7 | 247.6 | 272.9 | 306.9 | 343.7 | 379.1 | 399.1 | 400.8 | 392.4 |
| 69° | 209.4 | 212.4 | 226.2 | 247.8 | 278.2 | 317.8 | 363.6 | 400.5 | 412.9 | 412.6 | 389.7 |
| 70° | 201.6 | 204.4 | 219.7 | 240.6 | 273.7 | 316.6 | 363.9 | 400.7 | 408.2 | 405.3 | 379.1 |
| 72.5° | 168.9 | 171.3 | 185.7 | 207.5 | 239.7 | 282.2 | 326.8 | 351.9 | 350.3 | 348.0 | 304.7 |
| 75° | 105.5 | 105.3 | 117.8 | 130.5 | 155.4 | 198.4 | 231.6 | 251.8 | 248.6 | 246.7 | 195.6 |
| 77.5° | 39.4 | 42.2 | 46.8 | 60.4 | 71.9 | 95.1 | 121.9 | 144.3 | 150.6 | 142.6 | 105.3 |
| 80° | 20.5 | 22.0 | 25.0 | 29.8 | 34.3 | 39.3 | 47.2 | 60.8 | 62.9 | 58.6 | 42.5 |
| 82.5° | 16.2 | 18.0 | 21.0 | 25.1 | 28.3 | 26.4 | 24.9 | 25.7 | 25.6 | 24.4 | 21.6 |
| 85° | 12.3 | 14.4 | 19.3 | 23.5 | 27.9 | 23.6 | 18.8 | 16.4 | 14.6 | 14.7 | 15.7 |
| 87.5° | 6.1 | 7.9 | 15.2 | 20.5 | 24.3 | 15.7 | 12.3 | 9.5 | 7.9 | 7.6 | 10.2 |
| 90° | 1.9 | 1.9 | 3.1 | 4.0 | 5.5 | 2.8 | 2.7 | 2.0 | 1.5 | 1.5 | 2.4 |
| 92.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 39° | 40° | 45° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0° | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 |
| 2.5° | 82.2 | 82.2 | 82.0 | 81.9 | 81.7 | 81.4 | 81.1 | 80.8 | 80.5 | 80.1 | 79.7 |
| 5° | 81.1 | 80.8 | 80.7 | 80.4 | 79.9 | 79.5 | 79.0 | 78.5 | 77.8 | 77.1 | 76.2 |
| 7.5° | 79.8 | 79.3 | 78.8 | 78.6 | 78.1 | 77.6 | 77.1 | 76.3 | 75.4 | 74.0 | 72.9 |
| 10° | 79.3 | 78.8 | 78.3 | 78.0 | 77.3 | 76.7 | 76.1 | 75.1 | 74.0 | 72.1 | 70.0 |
| 12.5° | 79.8 | 79.3 | 78.9 | 78.3 | 77.7 | 77.1 | 76.2 | 74.9 | 73.4 | 71.0 | 68.5 |
| 15° | 81.1 | 80.7 | 79.9 | 79.3 | 78.5 | 77.9 | 76.7 | 75.3 | 73.1 | 70.1 | 66.8 |
| 17.5° | 82.6 | 81.9 | 81.2 | 80.4 | 79.6 | 78.9 | 77.6 | 75.8 | 73.0 | 69.5 | 65.2 |
| 20° | 84.1 | 83.3 | 82.2 | 81.5 | 80.8 | 79.7 | 78.4 | 76.2 | 72.9 | 68.2 | 63.6 |
| 22.5° | 85.7 | 84.7 | 83.5 | 82.8 | 82.2 | 81.3 | 79.7 | 76.9 | 72.9 | 67.5 | 61.7 |
| 25° | 87.8 | 86.5 | 85.3 | 84.6 | 84.2 | 83.6 | 81.7 | 78.5 | 73.4 | 67.1 | 60.1 |
| 27.5° | 90.4 | 88.6 | 87.6 | 87.1 | 87.0 | 86.6 | 84.7 | 80.8 | 74.7 | 67.1 | 58.6 |
| 30° | 93.3 | 91.9 | 90.5 | 90.5 | 91.5 | 91.1 | 89.0 | 84.1 | 76.7 | 67.4 | 57.5 |
| 32.5° | 97.5 | 96.0 | 95.2 | 96.0 | 97.0 | 97.4 | 94.9 | 88.9 | 79.9 | 68.5 | 56.4 |
| 35° | 103.7 | 102.7 | 102.2 | 103.3 | 105.4 | 106.2 | 103.2 | 96.1 | 84.6 | 70.6 | 55.8 |
| 37.5° | 111.8 | 111.1 | 110.3 | 112.4 | 116.2 | 117.8 | 113.5 | 104.4 | 91.4 | 74.1 | 55.5 |
| 40° | 121.1 | 121.1 | 121.9 | 126.0 | 129.7 | 133.0 | 128.1 | 116.9 | 100.7 | 79.2 | 55.8 |
| 42.5° | 132.1 | 132.9 | 135.6 | 141.3 | 148.4 | 151.0 | 146.3 | 132.0 | 112.2 | 85.2 | 56.6 |
| 45° | 145.8 | 148.0 | 152.6 | 161.0 | 169.7 | 173.7 | 167.0 | 151.0 | 126.8 | 94.9 | 58.8 |
| 47.5° | 160.3 | 165.4 | 173.1 | 183.3 | 193.4 | 196.0 | 187.7 | 168.3 | 141.0 | 103.5 | 62.2 |
| 50° | 179.0 | 185.1 | 192.8 | 205.1 | 215.8 | 217.4 | 206.4 | 184.3 | 153.5 | 111.0 | 65.4 |
| 52.5° | 196.4 | 204.7 | 214.6 | 228.8 | 239.7 | 237.7 | 223.5 | 198.5 | 163.3 | 116.1 | 67.2 |
| 55° | 220.1 | 228.8 | 239.9 | 252.3 | 263.1 | 258.4 | 239.0 | 210.6 | 171.2 | 119.9 | 67.8 |
| 57.5° | 247.3 | 253.9 | 264.8 | 277.5 | 284.6 | 276.5 | 254.3 | 222.4 | 178.7 | 119.9 | 63.4 |
| 60° | 274.0 | 281.7 | 293.7 | 306.2 | 310.1 | 296.1 | 264.9 | 224.2 | 171.3 | 107.0 | 50.8 |
| 62.5° | 313.5 | 321.3 | 327.3 | 329.4 | 322.3 | 294.1 | 252.6 | 205.1 | 147.7 | 84.5 | 36.0 |
| 65° | 357.6 | 348.8 | 337.1 | 326.1 | 306.8 | 264.0 | 217.8 | 168.5 | 114.6 | 56.4 | 24.8 |
| 67.5° | 369.2 | 342.4 | 316.9 | 292.3 | 256.3 | 210.2 | 164.3 | 118.5 | 73.5 | 32.1 | 16.8 |
| 69° | 357.2 | 318.0 | 289.6 | 250.6 | 213.5 | 157.3 | 113.2 | 76.0 | 43.9 | 22.4 | 14.1 |
| 70° | 335.1 | 294.4 | 255.9 | 214.2 | 165.4 | 120.2 | 75.2 | 49.7 | 28.6 | 16.3 | 12.7 |
| 72.5° | 252.9 | 202.2 | 155.8 | 101.2 | 61.7 | 34.2 | 24.1 | 17.2 | 13.6 | 12.0 | 10.9 |
| 75° | 146.2 | 97.4 | 63.8 | 34.0 | 20.1 | 15.0 | 13.1 | 11.6 | 10.8 | 10.4 | 9.4 |
| 77.5° | 61.7 | 38.6 | 26.1 | 19.1 | 13.5 | 11.6 | 10.1 | 9.3 | 9.2 | 9.0 | 8.1 |
| 80° | 28.1 | 24.1 | 20.5 | 14.4 | 10.3 | 8.8 | 7.7 | 7.6 | 7.7 | 7.5 | 6.6 |
| 82.5° | 20.9 | 20.5 | 17.2 | 11.1 | 7.9 | 5.9 | 4.8 | 5.0 | 5.7 | 6.1 | 5.4 |
| 85° | 17.4 | 17.4 | 14.4 | 8.3 | 5.2 | 3.8 | 3.7 | 4.2 | 4.7 | 5.1 | 4.3 |
| 87.5° | 16.0 | 15.3 | 8.3 | 4.3 | 3.0 | 2.4 | 2.3 | 2.0 | 2.0 | 3.5 | 3.0 |
| 90° | 1.6 | 0.7 | 0.4 | 0.3 | 0.4 | 0.3 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| 92.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P227105

CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P227105

CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

CANDELA DISTRIBUTION (continued):

| | 105° | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° |
|--------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 | 81.2 |
| 2.5° | 79.3 | 78.9 | 78.2 | 78.0 | 77.8 | 77.4 | 77.4 | 77.0 | 76.2 | 76.0 | 76.1 |
| 5° | 75.6 | 74.4 | 73.5 | 72.8 | 72.3 | 70.8 | 70.3 | 69.7 | 68.6 | 68.2 | 67.8 |
| 7.5° | 71.4 | 69.9 | 68.2 | 66.9 | 65.4 | 63.9 | 62.7 | 61.2 | 60.1 | 59.3 | 58.1 |
| 10° | 68.1 | 66.0 | 63.8 | 61.2 | 59.3 | 57.0 | 55.5 | 53.8 | 51.9 | 50.1 | 48.9 |
| 12.5° | 65.6 | 62.7 | 59.4 | 56.4 | 53.6 | 51.2 | 48.5 | 46.0 | 43.7 | 41.3 | 39.3 |
| 15° | 63.5 | 60.0 | 55.8 | 52.0 | 48.6 | 44.9 | 42.0 | 38.6 | 35.6 | 33.5 | 30.9 |
| 17.5° | 61.3 | 56.7 | 51.8 | 47.4 | 42.9 | 39.1 | 35.3 | 31.8 | 29.0 | 26.3 | 24.2 |
| 20° | 58.6 | 53.1 | 47.8 | 42.7 | 37.5 | 33.2 | 29.4 | 26.0 | 23.2 | 21.1 | 19.5 |
| 22.5° | 55.6 | 49.2 | 43.0 | 37.4 | 32.3 | 28.0 | 24.4 | 21.9 | 19.8 | 18.7 | 18.2 |
| 25° | 52.7 | 45.3 | 38.3 | 32.2 | 27.1 | 23.5 | 21.0 | 18.9 | 17.9 | 17.4 | 17.4 |
| 27.5° | 50.1 | 41.4 | 33.6 | 27.6 | 22.7 | 19.8 | 17.9 | 17.1 | 16.6 | 16.6 | 16.8 |
| 30° | 47.5 | 37.5 | 29.1 | 23.1 | 19.1 | 17.0 | 16.0 | 15.7 | 15.7 | 16.1 | 16.4 |
| 32.5° | 44.6 | 33.7 | 25.3 | 19.8 | 16.6 | 15.2 | 14.4 | 14.5 | 14.9 | 15.4 | 16.0 |
| 35° | 41.6 | 29.7 | 21.9 | 17.4 | 14.9 | 13.8 | 13.3 | 13.4 | 13.9 | 14.6 | 15.2 |
| 37.5° | 38.8 | 26.4 | 19.3 | 15.5 | 13.6 | 12.9 | 12.5 | 12.6 | 13.0 | 13.9 | 14.6 |
| 40° | 36.0 | 23.7 | 17.2 | 14.4 | 12.9 | 12.2 | 12.0 | 11.9 | 12.2 | 13.0 | 13.9 |
| 42.5° | 33.7 | 21.3 | 15.9 | 13.6 | 12.4 | 11.8 | 11.5 | 11.5 | 11.6 | 12.3 | 13.1 |
| 45° | 32.3 | 19.9 | 15.0 | 13.1 | 12.0 | 11.5 | 11.2 | 11.0 | 11.3 | 11.6 | 12.4 |
| 47.5° | 32.3 | 19.2 | 14.5 | 12.7 | 11.7 | 11.3 | 10.9 | 10.8 | 10.9 | 11.3 | 12.0 |
| 50° | 33.4 | 19.4 | 14.4 | 12.5 | 11.6 | 10.9 | 10.5 | 10.5 | 10.7 | 11.3 | 11.9 |
| 52.5° | 34.3 | 19.7 | 14.6 | 12.7 | 11.6 | 10.8 | 10.3 | 10.2 | 10.5 | 11.0 | 11.6 |
| 55° | 34.2 | 19.7 | 14.9 | 12.9 | 11.8 | 10.9 | 10.2 | 10.2 | 10.3 | 10.9 | 11.4 |
| 57.5° | 30.5 | 18.5 | 14.6 | 13.1 | 12.1 | 11.3 | 10.6 | 10.4 | 10.5 | 11.0 | 11.5 |
| 60° | 24.7 | 16.4 | 14.0 | 13.1 | 12.6 | 12.0 | 11.3 | 11.2 | 11.3 | 11.7 | 12.3 |
| 62.5° | 19.4 | 14.6 | 13.2 | 13.0 | 12.8 | 12.5 | 12.3 | 12.1 | 12.1 | 12.5 | 13.0 |
| 65° | 15.7 | 13.2 | 12.6 | 12.7 | 12.8 | 12.8 | 12.7 | 12.6 | 12.6 | 12.8 | 13.3 |
| 67.5° | 13.1 | 11.9 | 11.7 | 12.0 | 12.1 | 12.2 | 12.3 | 12.2 | 12.3 | 12.5 | 13.1 |
| 69° | 12.0 | 11.2 | 11.0 | 11.2 | 11.5 | 11.6 | 11.7 | 11.6 | 11.7 | 12.0 | 12.5 |
| 70° | 11.3 | 10.6 | 10.5 | 10.7 | 10.9 | 11.0 | 11.2 | 11.1 | 11.2 | 11.4 | 12.0 |
| 72.5° | 9.8 | 9.1 | 8.8 | 9.0 | 9.2 | 9.2 | 9.4 | 9.5 | 9.4 | 9.4 | 9.8 |
| 75° | 8.3 | 7.6 | 7.2 | 7.2 | 7.2 | 7.2 | 7.4 | 7.4 | 7.2 | 7.2 | 7.2 |
| 77.5° | 7.0 | 6.1 | 5.7 | 5.7 | 5.7 | 5.6 | 5.4 | 5.4 | 5.5 | 5.4 | 5.5 |
| 80° | 5.5 | 4.8 | 4.3 | 4.3 | 4.3 | 4.2 | 4.1 | 4.1 | 4.3 | 4.4 | 4.3 |
| 82.5° | 4.3 | 3.5 | 3.3 | 3.2 | 3.2 | 3.1 | 3.1 | 3.2 | 3.1 | 3.2 | 3.4 |
| 85° | 3.1 | 2.5 | 2.3 | 2.4 | 2.3 | 2.1 | 2.2 | 2.4 | 2.4 | 2.4 | 2.5 |
| 87.5° | 1.9 | 1.6 | 1.5 | 1.6 | 1.4 | 1.2 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 |
| 90° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 92.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P227105
 CATALOG NUMBER: IST-AF-XXX-LED-E1-SL4-8030-XXB

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

| | 105° | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | |
|--------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0° |
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5° |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5° |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.5° |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10° |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5° |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15° |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.5° |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20° |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.5° |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25° |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.5° |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30° |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 32.5° |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 35° |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 37.5° |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40° |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.5° |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 45° |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 47.5° |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50° |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.5° |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55° |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 57.5° |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60° |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 62.5° |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 65° |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 67.5° |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 69° |
| | | | | | | | | | | | | 70° |
| | | | | | | | | | | | | 72.5° |
| | | | | | | | | | | | | 75° |
| | | | | | | | | | | | | 77.5° |
| | | | | | | | | | | | | 80° |
| | | | | | | | | | | | | 82.5° |
| | | | | | | | | | | | | 85° |
| | | | | | | | | | | | | 87.5° |
| | | | | | | | | | | | | 90° |
| | | | | | | | | | | | | 92.5° |
| | | | | | | | | | | | | 95° |
| | | | | | | | | | | | | 97.5° |
| | | | | | | | | | | | | 100° |
| | | | | | | | | | | | | 102.5° |
| | | | | | | | | | | | | 105° |
| | | | | | | | | | | | | 107.5° |

