

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: INVUE

Report Number: P400734

Luminaire Tested: **ENT-SA1-730-U-SL4-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-730-U-SL4-XXB
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 666 lumens
Efficiency: N/A
Efficacy: 51.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 13
Input Voltage (V): NR
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

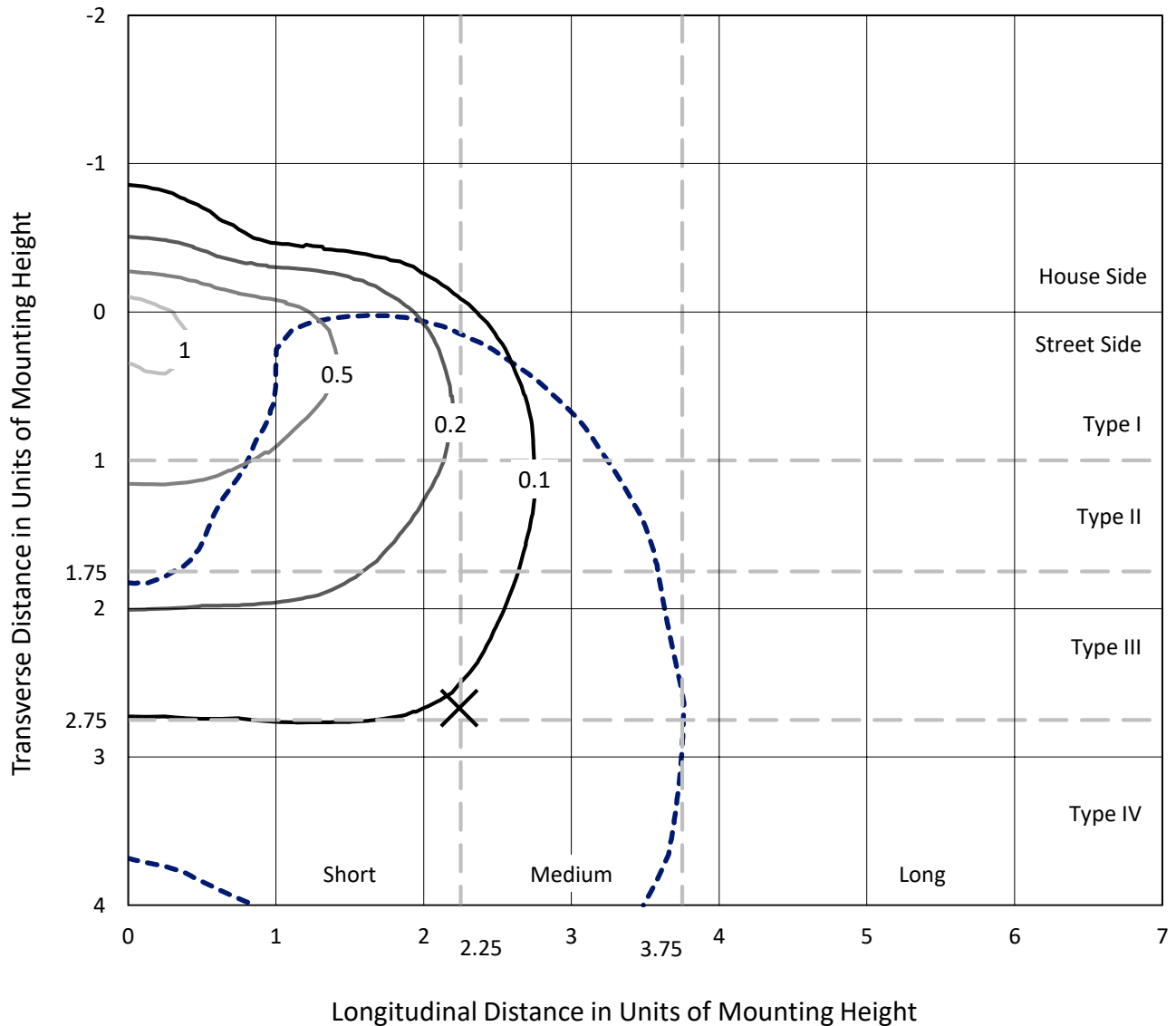


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

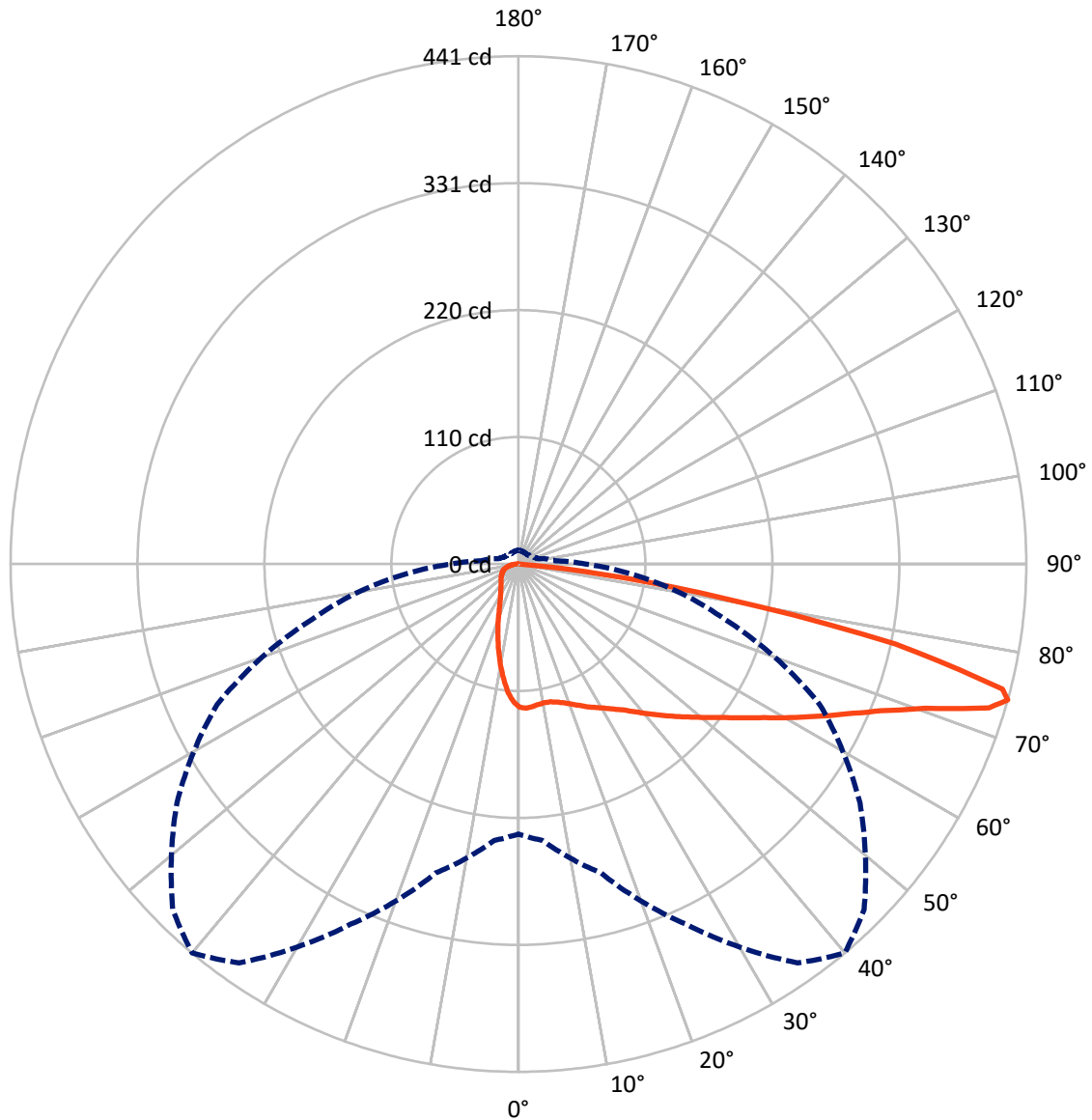


Based on 10 foot mounting height. Maximum calculated value = 1.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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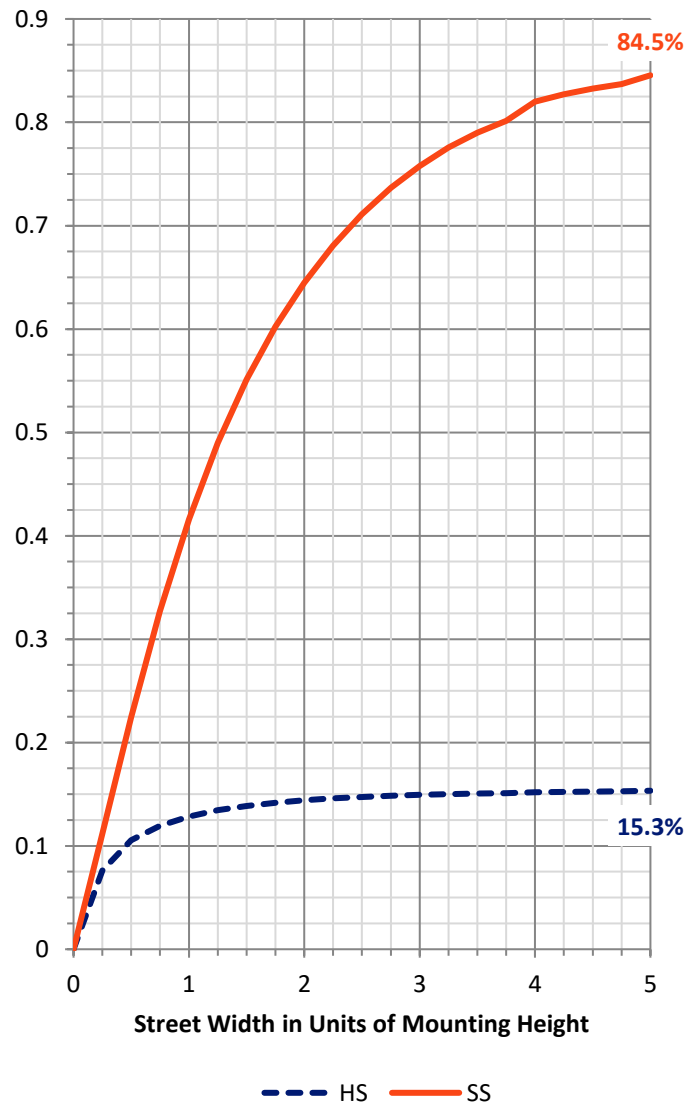
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| House Side | Lumens | 103.9 | 0.0 | 103.9 |
| | % Fixture | 15.6 | 0.0 | 15.6 |
| Street Side | Lumens | 562.2 | 0.0 | 562.2 |
| | % Fixture | 84.4 | 0.0 | 84.4 |
| Total | Lumens | 666.0 | 0.0 | 666.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 11.0 | 1.6 |
| 10°-20° | 28.3 | 4.2 |
| 20°-30° | 43.3 | 6.5 |
| 30°-40° | 62.6 | 9.4 |
| 40°-50° | 90.1 | 13.5 |
| 50°-60° | 124.4 | 18.7 |
| 60°-70° | 156.8 | 23.5 |
| 70°-80° | 136.0 | 20.4 |
| 80°-90° | 13.6 | 2.0 |
| 90°-100° | 0.0 | 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° | 666.0 | 100.0 |
| 0°-180° | 666.0 | 100.0 |



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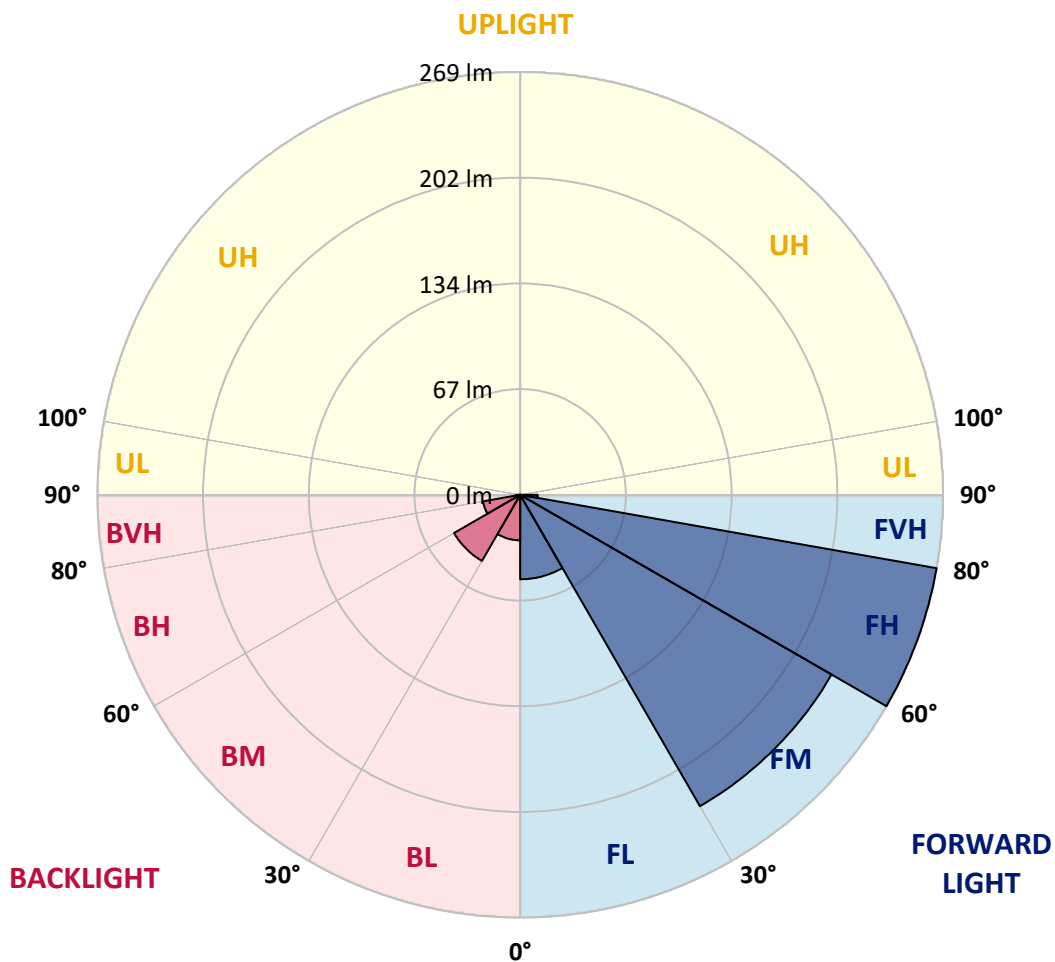
CATALOG NUMBER: ENT-SA1-730-U-SL4-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 53.7 | 8.1 | | | |
| FM | (30°-60°) | 228.5 | 34.3 | | | |
| FH | (60°-80°) | 268.8 | 40.4 | | | G0/660 |
| FVH | (80°-90°) | 11.1 | 1.7 | | | G1/100 |
| BL | (0°-30°) | 28.9 | 4.3 | B0/110 | | |
| BM | (30°-60°) | 48.5 | 7.3 | B0/220 | | |
| BH | (60°-80°) | 24.0 | 3.6 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.5 | 0.4 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 |
| 2.5° | 125.9 | 125.8 | 126.1 | 125.9 | 125.6 | 125.4 | 125.3 | 124.7 | 124.5 | 123.9 | 123.1 |
| 5° | 125.4 | 125.4 | 125.4 | 125.2 | 124.6 | 124.4 | 124.2 | 123.3 | 122.7 | 121.7 | 120.2 |
| 7.5° | 123.7 | 124.0 | 123.9 | 123.8 | 123.3 | 123.1 | 122.8 | 121.7 | 120.9 | 119.4 | 117.5 |
| 10° | 122.1 | 122.1 | 122.2 | 122.6 | 122.4 | 122.5 | 122.4 | 121.2 | 120.1 | 118.2 | 115.8 |
| 12.5° | 119.8 | 120.2 | 120.8 | 121.9 | 122.4 | 122.8 | 122.8 | 121.9 | 120.7 | 118.4 | 115.6 |
| 15° | 118.4 | 118.9 | 120.4 | 122.4 | 123.6 | 124.3 | 124.5 | 123.4 | 121.9 | 119.6 | 116.5 |
| 17.5° | 117.8 | 118.4 | 121.2 | 124.0 | 126.1 | 126.7 | 126.8 | 125.6 | 124.0 | 121.2 | 117.6 |
| 20° | 118.4 | 119.1 | 122.8 | 126.6 | 129.1 | 129.6 | 129.8 | 128.1 | 126.1 | 123.4 | 118.7 |
| 22.5° | 120.7 | 121.7 | 125.8 | 129.9 | 132.5 | 133.2 | 133.0 | 130.6 | 128.6 | 125.7 | 120.1 |
| 25° | 125.7 | 126.3 | 130.0 | 134.4 | 136.4 | 137.2 | 136.7 | 134.0 | 131.4 | 128.5 | 122.1 |
| 27.5° | 131.5 | 132.3 | 136.2 | 139.5 | 140.8 | 141.0 | 140.5 | 137.7 | 134.8 | 132.4 | 125.2 |
| 30° | 138.5 | 139.2 | 142.4 | 144.9 | 145.0 | 145.1 | 144.8 | 141.6 | 139.2 | 137.3 | 129.7 |
| 32.5° | 145.9 | 146.0 | 149.3 | 150.5 | 149.7 | 150.0 | 149.7 | 146.2 | 144.5 | 143.9 | 135.6 |
| 35° | 152.7 | 152.8 | 156.2 | 156.6 | 155.3 | 155.4 | 156.0 | 151.9 | 151.9 | 153.3 | 144.4 |
| 37.5° | 159.2 | 159.5 | 162.5 | 162.1 | 161.6 | 162.5 | 163.3 | 159.8 | 161.8 | 165.8 | 155.1 |
| 40° | 164.1 | 164.8 | 168.8 | 168.6 | 169.7 | 170.5 | 171.2 | 169.5 | 172.6 | 180.4 | 168.3 |
| 42.5° | 167.3 | 168.7 | 174.3 | 175.7 | 177.6 | 179.2 | 180.4 | 180.3 | 185.9 | 196.7 | 182.2 |
| 45° | 170.5 | 171.9 | 179.5 | 182.9 | 186.1 | 188.6 | 190.9 | 192.1 | 201.0 | 213.9 | 198.5 |
| 47.5° | 174.5 | 175.7 | 184.2 | 190.9 | 195.0 | 198.4 | 202.5 | 205.1 | 216.4 | 231.4 | 213.6 |
| 50° | 180.6 | 181.4 | 189.0 | 199.4 | 204.6 | 209.3 | 214.4 | 219.7 | 233.0 | 249.2 | 226.8 |
| 52.5° | 188.5 | 189.0 | 194.6 | 208.0 | 216.3 | 221.3 | 228.9 | 235.9 | 249.8 | 265.4 | 237.6 |
| 55° | 197.5 | 197.1 | 201.4 | 218.3 | 228.0 | 235.5 | 244.8 | 251.9 | 267.6 | 279.5 | 246.1 |
| 57.5° | 206.5 | 206.2 | 209.6 | 228.2 | 242.7 | 251.5 | 261.2 | 268.7 | 283.9 | 292.7 | 252.3 |
| 60° | 215.1 | 214.0 | 218.8 | 239.7 | 260.6 | 270.7 | 279.4 | 286.3 | 299.3 | 302.2 | 255.6 |
| 62.5° | 222.7 | 222.7 | 229.7 | 254.0 | 282.0 | 291.1 | 298.0 | 302.6 | 313.9 | 309.1 | 254.3 |
| 65° | 229.7 | 230.6 | 240.5 | 270.0 | 304.2 | 313.4 | 319.4 | 321.2 | 328.5 | 309.4 | 243.3 |
| 67.5° | 237.6 | 238.9 | 253.0 | 288.7 | 329.7 | 339.6 | 344.8 | 344.2 | 338.9 | 304.9 | 219.8 |
| 70° | 245.2 | 247.5 | 268.5 | 312.7 | 361.3 | 374.7 | 380.3 | 368.6 | 344.3 | 279.4 | 182.5 |
| 72.5° | 250.8 | 254.7 | 281.2 | 336.8 | 406.5 | 427.1 | 424.8 | 375.2 | 319.0 | 230.3 | 138.1 |
| 74° | 234.5 | 240.9 | 277.7 | 345.1 | 422.8 | 440.9 | 424.4 | 362.0 | 288.6 | 185.4 | 97.9 |
| 75° | 215.4 | 221.7 | 260.0 | 341.8 | 425.9 | 434.0 | 403.8 | 338.6 | 258.8 | 143.7 | 63.9 |
| 77.5° | 159.5 | 164.4 | 199.7 | 269.5 | 336.8 | 334.4 | 300.7 | 229.5 | 127.5 | 43.3 | 27.0 |
| 80° | 70.4 | 74.1 | 98.6 | 135.6 | 182.4 | 181.7 | 169.3 | 105.4 | 41.1 | 22.7 | 16.5 |
| 82.5° | 21.3 | 21.2 | 28.4 | 39.5 | 69.3 | 70.6 | 60.0 | 36.3 | 19.7 | 9.4 | 8.0 |
| 85° | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 2.6 | 2.2 | 7.0 | 3.6 | 1.7 | 2.9 |
| 87.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| 90° | 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: ENT-SA1-730-U-SL4-XXB

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 | 124.3 |
| 2.5° | 122.6 | 122.5 | 122.2 | 121.5 | 121.0 | 119.5 | 120.0 | 119.0 | 118.9 | 118.7 | 118.6 |
| 5° | 119.5 | 119.1 | 117.9 | 116.5 | 114.9 | 112.4 | 111.6 | 110.1 | 109.2 | 108.9 | 109.1 |
| 7.5° | 116.3 | 115.4 | 113.1 | 110.1 | 106.9 | 103.2 | 100.6 | 98.5 | 97.0 | 96.5 | 95.8 |
| 10° | 114.3 | 112.8 | 108.9 | 103.9 | 98.8 | 93.6 | 89.1 | 86.0 | 83.7 | 81.9 | 81.9 |
| 12.5° | 113.6 | 111.6 | 105.9 | 98.7 | 91.2 | 83.8 | 77.3 | 73.2 | 69.3 | 67.4 | 67.1 |
| 15° | 114.0 | 111.2 | 103.4 | 93.9 | 83.9 | 74.3 | 66.3 | 60.4 | 56.7 | 54.4 | 55.2 |
| 17.5° | 114.4 | 110.9 | 100.9 | 88.8 | 76.8 | 65.7 | 56.4 | 49.7 | 45.2 | 44.0 | 43.5 |
| 20° | 114.9 | 110.3 | 97.6 | 83.3 | 69.5 | 57.4 | 47.6 | 40.8 | 37.4 | 35.9 | 35.9 |
| 22.5° | 115.6 | 109.5 | 94.2 | 77.2 | 62.0 | 49.3 | 40.2 | 35.1 | 32.5 | 31.6 | 31.6 |
| 25° | 116.6 | 109.0 | 90.7 | 71.1 | 54.9 | 42.9 | 35.3 | 31.4 | 30.0 | 29.4 | 29.3 |
| 27.5° | 118.5 | 109.1 | 87.3 | 64.9 | 47.9 | 37.5 | 31.9 | 29.3 | 28.2 | 27.9 | 27.8 |
| 30° | 121.4 | 110.1 | 83.7 | 58.3 | 41.7 | 33.5 | 29.5 | 27.7 | 27.0 | 26.8 | 26.8 |
| 32.5° | 125.4 | 111.9 | 80.7 | 52.4 | 37.1 | 30.2 | 27.5 | 26.3 | 25.9 | 25.7 | 25.8 |
| 35° | 131.6 | 115.0 | 77.1 | 47.0 | 32.9 | 27.9 | 25.9 | 25.0 | 24.7 | 24.7 | 24.8 |
| 37.5° | 139.7 | 119.8 | 73.6 | 42.0 | 30.0 | 25.9 | 24.4 | 23.9 | 23.6 | 23.8 | 23.9 |
| 40° | 149.9 | 125.5 | 70.3 | 37.5 | 27.6 | 24.3 | 23.1 | 22.7 | 22.6 | 22.8 | 23.0 |
| 42.5° | 160.9 | 132.4 | 67.3 | 33.9 | 25.7 | 23.0 | 22.0 | 21.8 | 21.7 | 21.8 | 22.1 |
| 45° | 173.6 | 140.3 | 64.8 | 31.1 | 24.3 | 21.9 | 21.0 | 20.8 | 20.7 | 20.9 | 21.1 |
| 47.5° | 185.4 | 147.4 | 62.8 | 29.2 | 23.1 | 21.1 | 20.2 | 19.9 | 19.9 | 19.9 | 20.1 |
| 50° | 195.0 | 153.0 | 61.6 | 27.9 | 22.1 | 20.2 | 19.4 | 19.1 | 19.0 | 18.9 | 19.0 |
| 52.5° | 203.3 | 157.2 | 61.2 | 27.1 | 21.3 | 19.4 | 18.6 | 18.4 | 18.2 | 18.0 | 18.1 |
| 55° | 208.8 | 159.3 | 60.4 | 26.4 | 20.6 | 18.5 | 17.8 | 17.6 | 17.4 | 17.1 | 17.1 |
| 57.5° | 212.0 | 159.1 | 58.6 | 26.0 | 20.2 | 17.7 | 17.0 | 17.0 | 16.8 | 16.3 | 16.4 |
| 60° | 212.3 | 155.6 | 54.2 | 25.5 | 19.9 | 16.9 | 16.1 | 16.3 | 16.3 | 15.9 | 15.9 |
| 62.5° | 207.2 | 146.4 | 45.7 | 24.2 | 19.5 | 16.3 | 15.4 | 15.9 | 16.1 | 15.7 | 15.7 |
| 65° | 191.5 | 124.7 | 36.7 | 22.3 | 18.5 | 15.6 | 14.6 | 15.6 | 16.2 | 15.9 | 15.8 |
| 67.5° | 161.5 | 98.8 | 30.4 | 20.2 | 17.4 | 14.7 | 13.8 | 15.1 | 15.9 | 15.9 | 15.8 |
| 70° | 129.6 | 75.0 | 25.0 | 17.9 | 15.7 | 13.6 | 12.9 | 14.0 | 14.7 | 14.9 | 14.9 |
| 72.5° | 89.3 | 45.8 | 20.3 | 15.4 | 13.8 | 12.3 | 11.7 | 12.4 | 12.8 | 13.2 | 13.1 |
| 74° | 57.6 | 32.2 | 17.8 | 14.0 | 12.6 | 11.3 | 11.0 | 11.3 | 11.5 | 11.9 | 12.0 |
| 75° | 38.5 | 26.3 | 16.6 | 13.0 | 11.9 | 10.6 | 10.4 | 10.7 | 10.9 | 11.2 | 11.2 |
| 77.5° | 22.2 | 18.8 | 13.4 | 10.8 | 9.9 | 9.1 | 9.0 | 9.1 | 9.4 | 9.7 | 9.6 |
| 80° | 15.4 | 14.3 | 10.6 | 8.4 | 7.8 | 7.4 | 7.5 | 7.6 | 8.1 | 8.2 | 8.1 |
| 82.5° | 9.3 | 10.3 | 7.5 | 6.3 | 5.9 | 5.8 | 6.1 | 6.3 | 6.7 | 6.8 | 6.7 |
| 85° | 3.7 | 4.9 | 3.7 | 3.5 | 3.9 | 4.3 | 4.8 | 5.1 | 5.3 | 5.3 | 5.3 |
| 87.5° | 0.0 | 0.7 | 0.9 | 1.4 | 2.2 | 2.6 | 3.4 | 3.7 | 3.9 | 3.8 | 3.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)