

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: P400798

Luminaire Tested: **ENT-SA1-740-U-T4W-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-740-U-T4W-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 576 lumens
Efficiency: N/A
Efficacy: 44.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B0 - U0 - G0

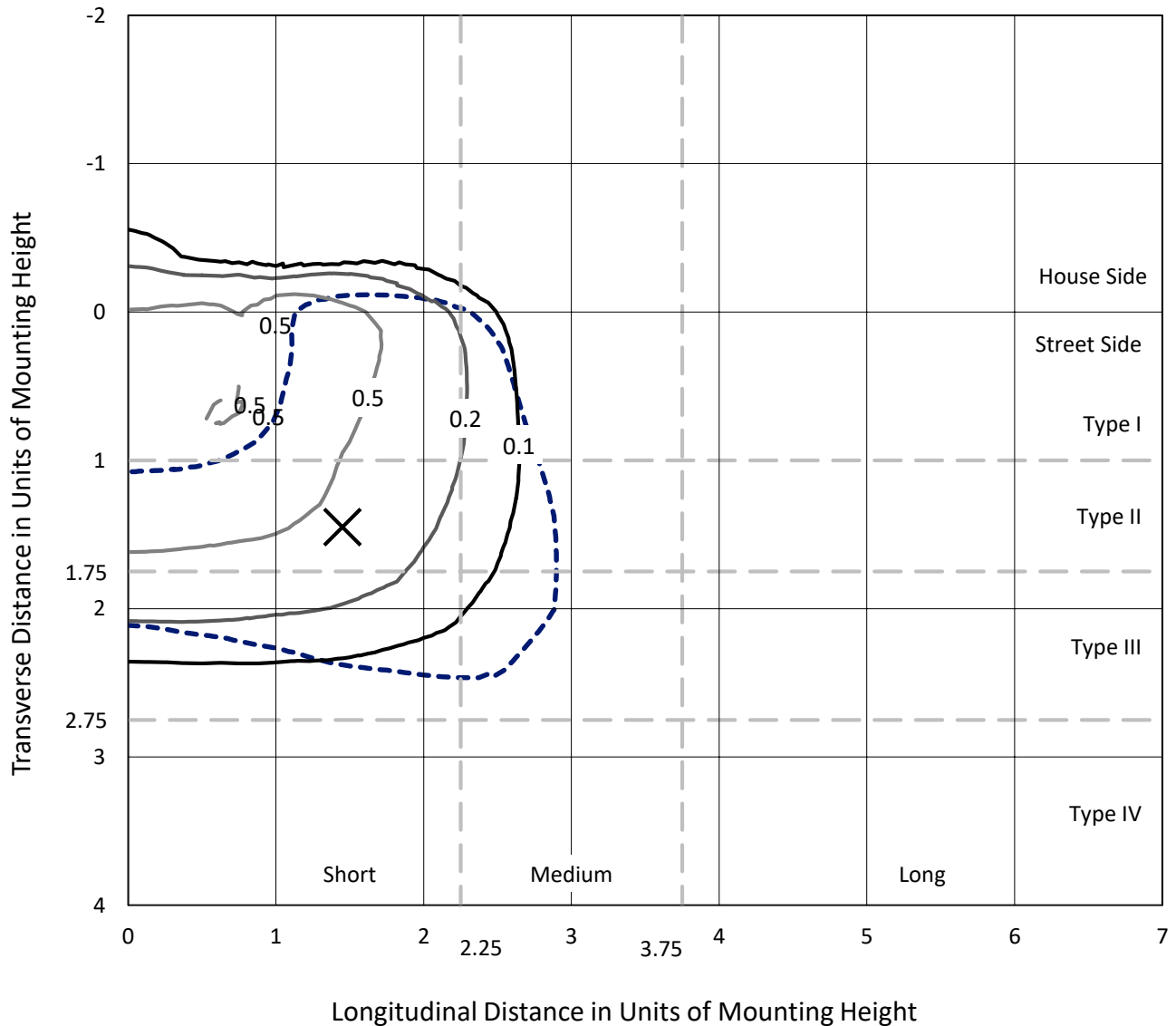
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

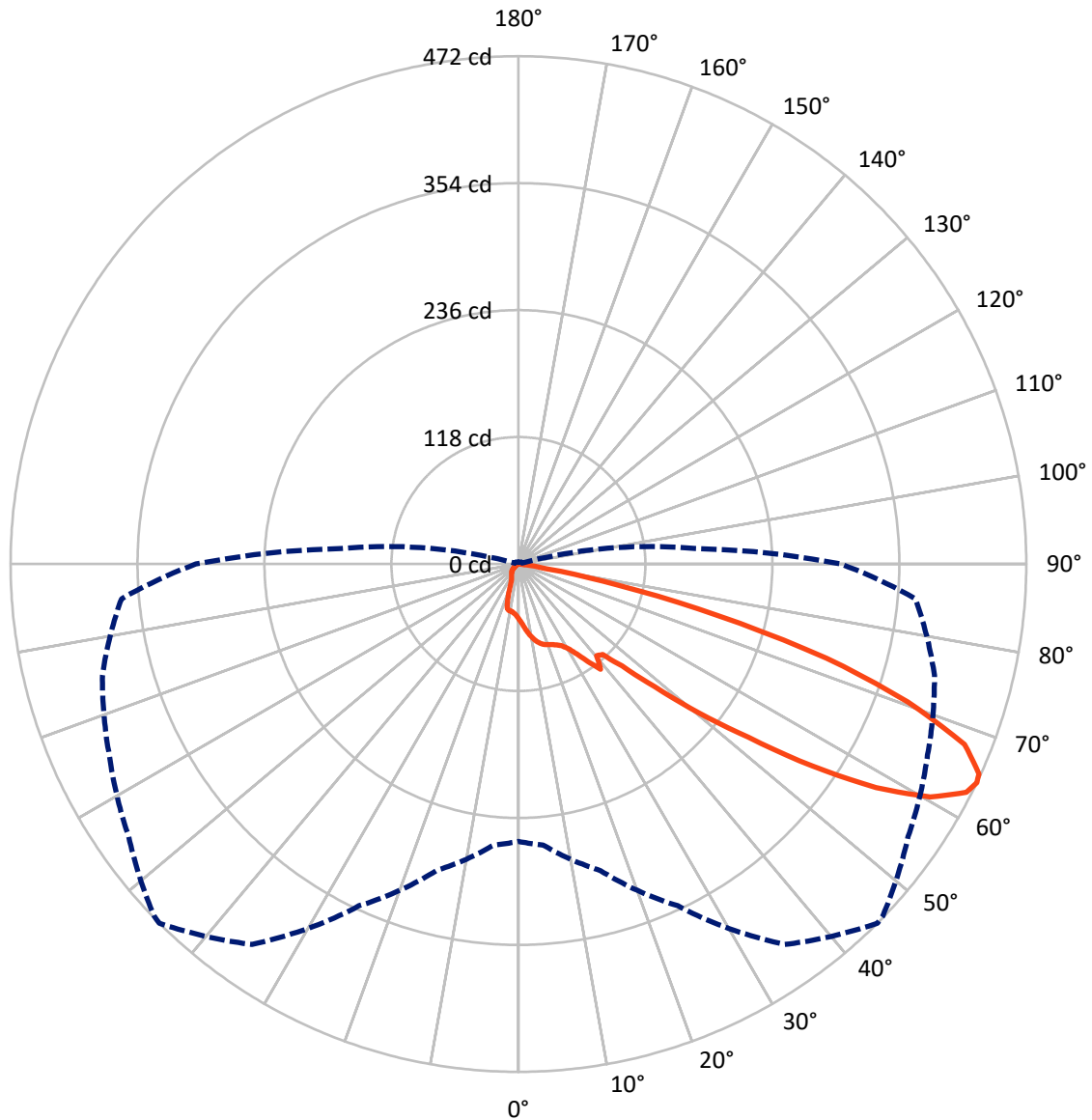
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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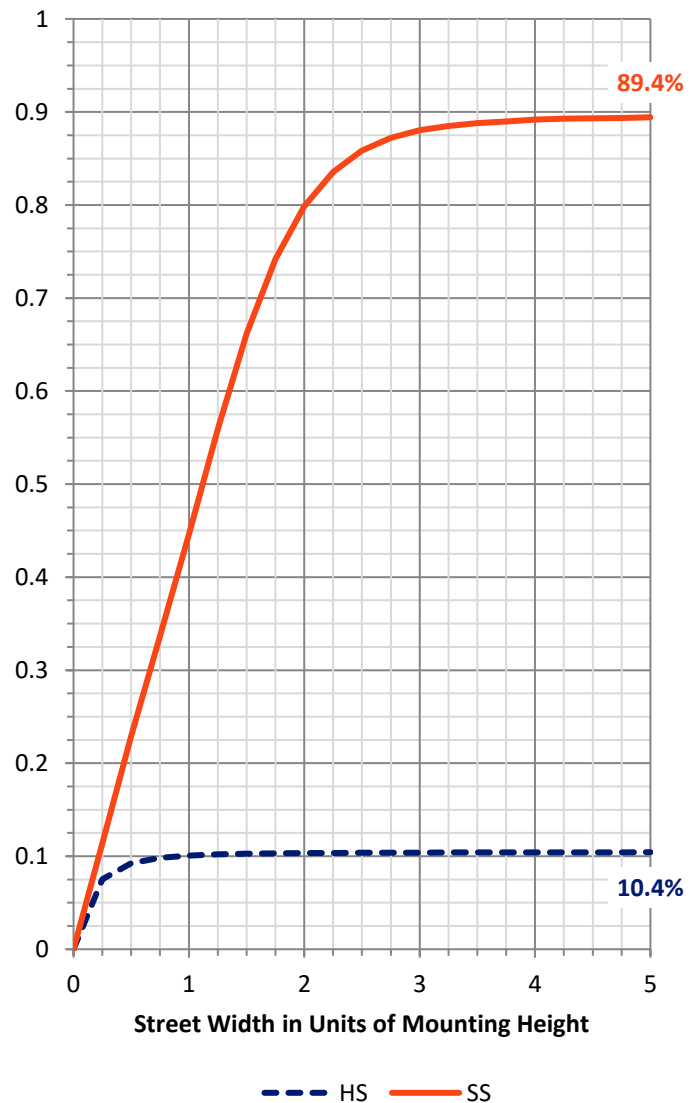
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| House Side | Lumens | 60.8 | 0.0 | 60.8 |
| | % Fixture | 10.6 | 0.0 | 10.6 |
| Street Side | Lumens | 515.2 | 0.0 | 515.2 |
| | % Fixture | 89.4 | 0.0 | 89.4 |
| Total | Lumens | 576.0 | 0.0 | 576.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 5.2 | 0.9 |
| 10°-20° | 16.1 | 2.8 |
| 20°-30° | 26.3 | 4.6 |
| 30°-40° | 41.8 | 7.2 |
| 40°-50° | 79.5 | 13.8 |
| 50°-60° | 163.9 | 28.5 |
| 60°-70° | 183.0 | 31.8 |
| 70°-80° | 57.8 | 10.0 |
| 80°-90° | 2.3 | 0.4 |
| 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° | 576.0 | 100.0 |
| 0°-180° | 576.0 | 100.0 |



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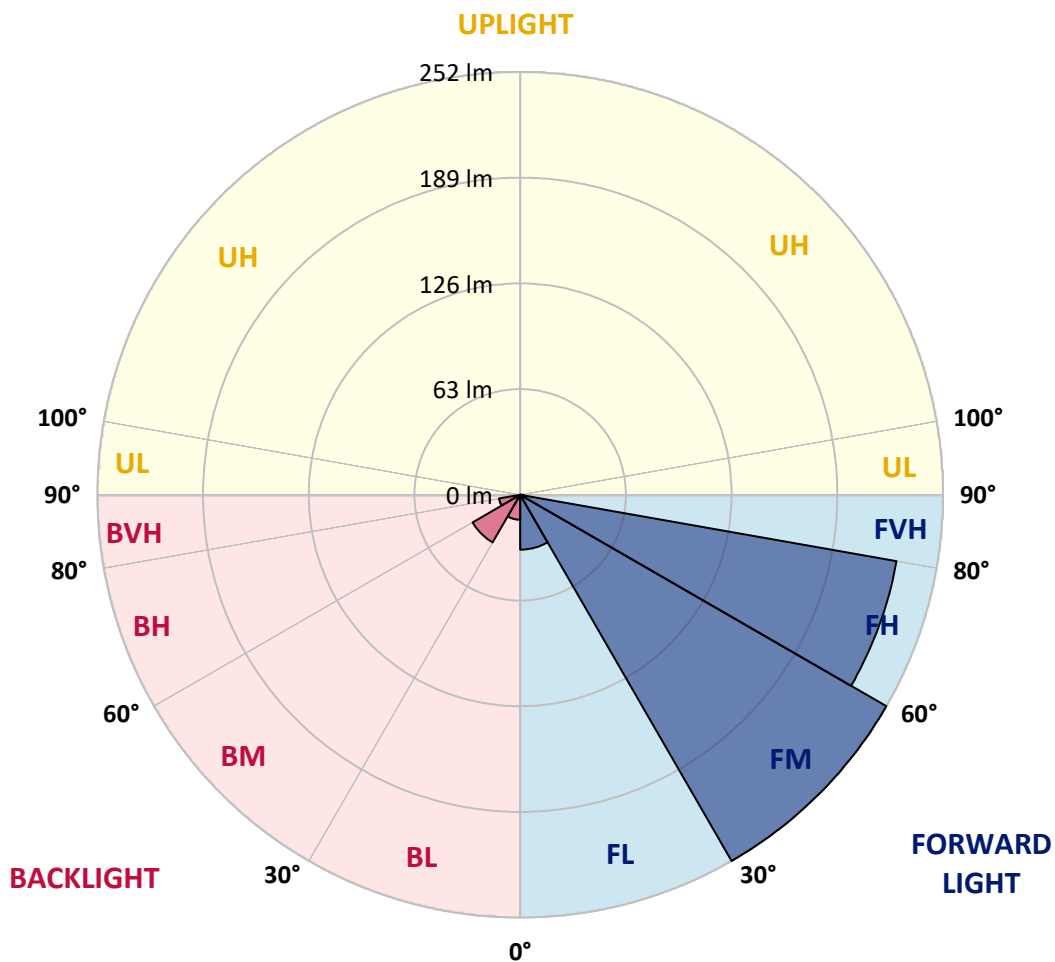
CATALOG NUMBER: ENT-SA1-740-U-T4W-HSS-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 32.7 | 5.7 | | | |
| FM | (30°-60°) | 252.4 | 43.8 | | | |
| FH | (60°-80°) | 228.0 | 39.6 | | | G0/660 |
| FVH | (80°-90°) | 2.1 | 0.4 | | | G0/10 |
| BL | (0°-30°) | 14.9 | 2.6 | B0/110 | | |
| BM | (30°-60°) | 32.8 | 5.7 | B0/220 | | |
| BH | (60°-80°) | 12.8 | 2.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.3 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 |
| 2.5° | 56.3 | 56.5 | 56.2 | 55.8 | 55.3 | 54.6 | 54.7 | 53.7 | 52.9 | 52.4 | 51.5 |
| 5° | 63.5 | 63.4 | 62.7 | 61.7 | 60.7 | 59.3 | 59.1 | 57.5 | 55.9 | 54.1 | 52.5 |
| 7.5° | 70.7 | 70.4 | 69.7 | 68.4 | 66.5 | 64.7 | 64.1 | 61.9 | 59.5 | 56.9 | 54.0 |
| 10° | 76.6 | 76.4 | 75.6 | 74.2 | 72.0 | 69.2 | 69.2 | 66.1 | 62.9 | 59.7 | 56.3 |
| 12.5° | 81.5 | 81.2 | 80.4 | 78.6 | 76.0 | 73.5 | 73.1 | 70.4 | 66.9 | 63.1 | 59.0 |
| 15° | 84.4 | 84.2 | 83.2 | 81.2 | 78.9 | 76.6 | 76.3 | 73.7 | 70.5 | 66.2 | 61.4 |
| 17.5° | 85.2 | 85.0 | 84.2 | 82.5 | 80.7 | 78.7 | 78.3 | 76.0 | 73.2 | 68.8 | 63.9 |
| 20° | 84.9 | 84.4 | 84.0 | 82.6 | 81.1 | 79.8 | 79.6 | 78.0 | 75.5 | 71.8 | 66.5 |
| 22.5° | 84.0 | 83.6 | 83.2 | 82.2 | 81.5 | 81.4 | 81.1 | 80.2 | 78.6 | 75.4 | 70.5 |
| 25° | 83.7 | 83.3 | 83.0 | 82.3 | 82.2 | 83.3 | 83.2 | 83.1 | 82.5 | 79.7 | 74.6 |
| 27.5° | 85.5 | 85.4 | 84.7 | 83.6 | 84.1 | 86.0 | 86.1 | 86.6 | 86.2 | 84.4 | 80.5 |
| 30° | 92.1 | 91.6 | 89.8 | 87.4 | 88.8 | 91.2 | 91.7 | 93.4 | 93.5 | 93.8 | 88.4 |
| 32.5° | 101.0 | 100.1 | 97.2 | 94.1 | 95.0 | 99.5 | 99.6 | 102.3 | 108.1 | 104.5 | 92.7 |
| 35° | 107.2 | 106.1 | 101.6 | 99.9 | 104.3 | 111.4 | 112.4 | 118.0 | 118.5 | 105.3 | 92.3 |
| 37.5° | 124.4 | 122.8 | 114.5 | 104.5 | 108.8 | 124.2 | 125.3 | 124.3 | 115.1 | 104.2 | 97.1 |
| 40° | 147.5 | 145.9 | 138.6 | 121.8 | 109.7 | 112.0 | 112.5 | 115.5 | 117.3 | 111.9 | 112.2 |
| 42.5° | 177.4 | 175.5 | 167.9 | 147.3 | 123.4 | 115.0 | 116.1 | 122.1 | 133.6 | 136.1 | 149.1 |
| 45° | 208.1 | 207.0 | 199.3 | 177.1 | 148.4 | 135.2 | 135.7 | 143.1 | 163.7 | 179.6 | 190.6 |
| 47.5° | 238.0 | 238.3 | 231.7 | 212.9 | 184.9 | 170.2 | 169.5 | 179.1 | 205.2 | 216.5 | 227.7 |
| 50° | 280.3 | 280.1 | 268.3 | 256.7 | 234.9 | 217.4 | 216.3 | 221.7 | 246.8 | 251.0 | 268.3 |
| 52.5° | 328.4 | 328.2 | 310.5 | 305.0 | 295.8 | 267.7 | 270.6 | 266.0 | 284.2 | 291.6 | 316.2 |
| 55° | 351.2 | 349.3 | 341.8 | 348.7 | 359.7 | 331.5 | 331.0 | 313.5 | 327.6 | 334.0 | 356.9 |
| 57.5° | 348.9 | 349.7 | 356.8 | 379.8 | 415.8 | 392.2 | 392.8 | 360.2 | 368.5 | 372.4 | 389.2 |
| 60° | 335.9 | 336.4 | 353.0 | 391.2 | 443.8 | 439.7 | 437.4 | 403.9 | 398.6 | 396.9 | 404.9 |
| 62.5° | 298.5 | 298.8 | 325.7 | 374.7 | 443.6 | 467.2 | 465.0 | 434.7 | 417.9 | 407.3 | 392.7 |
| 64° | 257.9 | 262.1 | 295.0 | 350.5 | 431.6 | 472.0 | 470.8 | 442.1 | 419.6 | 400.3 | 370.3 |
| 65° | 224.5 | 230.8 | 270.6 | 328.9 | 418.1 | 470.4 | 468.9 | 440.8 | 417.2 | 387.1 | 347.2 |
| 67.5° | 153.2 | 156.5 | 192.3 | 258.9 | 366.6 | 447.2 | 446.8 | 423.9 | 391.0 | 334.4 | 272.4 |
| 70° | 90.4 | 92.8 | 119.2 | 180.7 | 281.7 | 384.2 | 390.0 | 381.8 | 324.6 | 240.2 | 173.5 |
| 72.5° | 28.1 | 29.5 | 52.6 | 100.4 | 184.7 | 299.3 | 306.9 | 301.0 | 236.3 | 150.1 | 96.2 |
| 75° | 10.5 | 11.0 | 17.3 | 43.6 | 91.9 | 191.4 | 193.7 | 200.6 | 143.9 | 79.3 | 42.1 |
| 77.5° | 5.8 | 5.9 | 8.6 | 16.4 | 40.4 | 94.0 | 96.2 | 95.3 | 76.5 | 37.4 | 13.4 |
| 80° | 2.9 | 3.0 | 4.2 | 7.2 | 15.7 | 26.6 | 31.5 | 41.6 | 27.0 | 18.4 | 4.3 |
| 82.5° | 1.0 | 0.9 | 1.9 | 3.3 | 5.3 | 7.1 | 8.0 | 11.5 | 11.3 | 10.1 | 1.5 |
| 85° | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 1.4 | 2.9 | 3.3 | 0.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| 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-SA1-740-U-T4W-HSS-XXB

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 0° | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 | 51.1 |
| 2.5° | 51.1 | 50.8 | 50.1 | 49.3 | 48.7 | 48.1 | 48.0 | 47.5 | 47.4 | 47.4 | 47.4 |
| 5° | 51.6 | 50.9 | 49.5 | 48.3 | 47.2 | 46.2 | 45.8 | 45.3 | 45.0 | 44.9 | 44.9 |
| 7.5° | 52.8 | 51.8 | 49.5 | 47.8 | 46.1 | 44.9 | 44.2 | 43.8 | 43.5 | 43.5 | 43.5 |
| 10° | 54.6 | 53.0 | 50.2 | 47.8 | 45.8 | 44.2 | 43.3 | 42.6 | 42.2 | 42.1 | 42.2 |
| 12.5° | 56.8 | 54.8 | 51.3 | 48.3 | 46.0 | 44.0 | 41.9 | 38.1 | 35.6 | 34.1 | 33.9 |
| 15° | 58.9 | 56.5 | 52.5 | 49.1 | 46.3 | 41.9 | 34.4 | 28.4 | 24.5 | 23.3 | 23.1 |
| 17.5° | 61.2 | 58.7 | 54.1 | 50.2 | 45.1 | 33.8 | 24.5 | 19.5 | 18.8 | 19.0 | 19.0 |
| 20° | 64.0 | 61.2 | 55.9 | 51.3 | 38.9 | 24.0 | 17.9 | 17.2 | 17.5 | 17.9 | 17.9 |
| 22.5° | 67.3 | 64.2 | 58.3 | 50.6 | 29.6 | 17.6 | 16.4 | 16.5 | 16.7 | 17.1 | 17.1 |
| 25° | 71.6 | 68.4 | 60.9 | 45.7 | 20.6 | 15.4 | 15.5 | 15.6 | 15.9 | 16.4 | 16.5 |
| 27.5° | 78.0 | 74.1 | 64.1 | 38.3 | 15.6 | 14.3 | 14.4 | 14.7 | 15.0 | 15.6 | 15.6 |
| 30° | 84.8 | 80.0 | 67.0 | 29.5 | 13.6 | 13.1 | 13.2 | 13.5 | 14.1 | 14.5 | 14.7 |
| 32.5° | 87.7 | 83.6 | 67.5 | 20.2 | 12.6 | 12.1 | 11.9 | 12.2 | 12.6 | 13.1 | 13.2 |
| 35° | 89.4 | 87.6 | 64.9 | 14.6 | 11.9 | 11.2 | 10.8 | 10.7 | 10.8 | 11.1 | 11.1 |
| 37.5° | 97.5 | 96.3 | 59.6 | 12.5 | 11.1 | 10.4 | 9.8 | 9.2 | 9.0 | 8.9 | 9.0 |
| 40° | 113.1 | 110.5 | 52.7 | 11.5 | 10.4 | 9.7 | 8.8 | 7.9 | 7.1 | 6.8 | 6.8 |
| 42.5° | 147.5 | 134.2 | 42.8 | 10.9 | 9.8 | 8.9 | 7.6 | 6.4 | 5.5 | 5.3 | 5.3 |
| 45° | 184.5 | 163.6 | 32.2 | 10.3 | 9.1 | 8.0 | 6.4 | 5.1 | 4.3 | 4.1 | 4.1 |
| 47.5° | 220.0 | 185.3 | 22.5 | 9.7 | 8.3 | 7.0 | 5.3 | 4.1 | 3.5 | 3.4 | 3.4 |
| 50° | 257.4 | 204.2 | 15.7 | 8.9 | 7.6 | 6.0 | 4.3 | 3.3 | 3.0 | 3.0 | 3.0 |
| 52.5° | 293.7 | 218.2 | 11.5 | 8.1 | 6.6 | 5.1 | 3.6 | 3.0 | 2.7 | 2.7 | 2.7 |
| 55° | 321.2 | 223.5 | 8.8 | 7.1 | 5.6 | 4.3 | 3.3 | 2.9 | 2.6 | 2.5 | 2.5 |
| 57.5° | 339.5 | 219.0 | 7.1 | 5.9 | 4.7 | 3.7 | 3.0 | 2.6 | 2.4 | 2.3 | 2.3 |
| 60° | 339.0 | 204.1 | 5.7 | 4.8 | 3.8 | 3.2 | 2.7 | 2.4 | 2.2 | 2.1 | 2.1 |
| 62.5° | 319.2 | 179.8 | 4.5 | 3.8 | 3.2 | 2.7 | 2.4 | 2.2 | 2.0 | 1.9 | 1.8 |
| 64° | 299.7 | 164.8 | 3.8 | 3.3 | 2.9 | 2.5 | 2.2 | 2.0 | 1.8 | 1.5 | 1.5 |
| 65° | 278.7 | 150.5 | 3.5 | 3.0 | 2.5 | 2.3 | 2.1 | 1.9 | 1.5 | 1.3 | 1.3 |
| 67.5° | 211.9 | 111.4 | 2.9 | 2.3 | 2.0 | 1.9 | 1.6 | 1.4 | 1.1 | 0.9 | 0.9 |
| 70° | 137.6 | 72.1 | 2.4 | 1.9 | 1.6 | 1.6 | 1.5 | 1.2 | 0.9 | 0.8 | 0.7 |
| 72.5° | 70.5 | 35.9 | 2.0 | 1.5 | 1.4 | 1.4 | 1.3 | 1.0 | 0.8 | 0.7 | 0.5 |
| 75° | 29.9 | 14.6 | 1.6 | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 0.5 |
| 77.5° | 10.4 | 5.5 | 1.5 | 1.3 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.7 |
| 80° | 3.5 | 2.1 | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.1 | 1.2 | 1.0 | 0.8 |
| 82.5° | 1.4 | 0.8 | 0.3 | 0.4 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 |
| 85° | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 |
| 87.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 |
| 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)