

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: P833522

Luminaire Tested: **TTN-D2-735-U-CQ-UPL2**

Issue Date: 5/15/2024

Test Information

Test Method: LM-79-08
Report Number: P833522
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND
Test Lab: INNOVATION CENTER
Issue Date: 5/15/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TTN-D2-735-U-CQ-UPL2
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5583.8 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

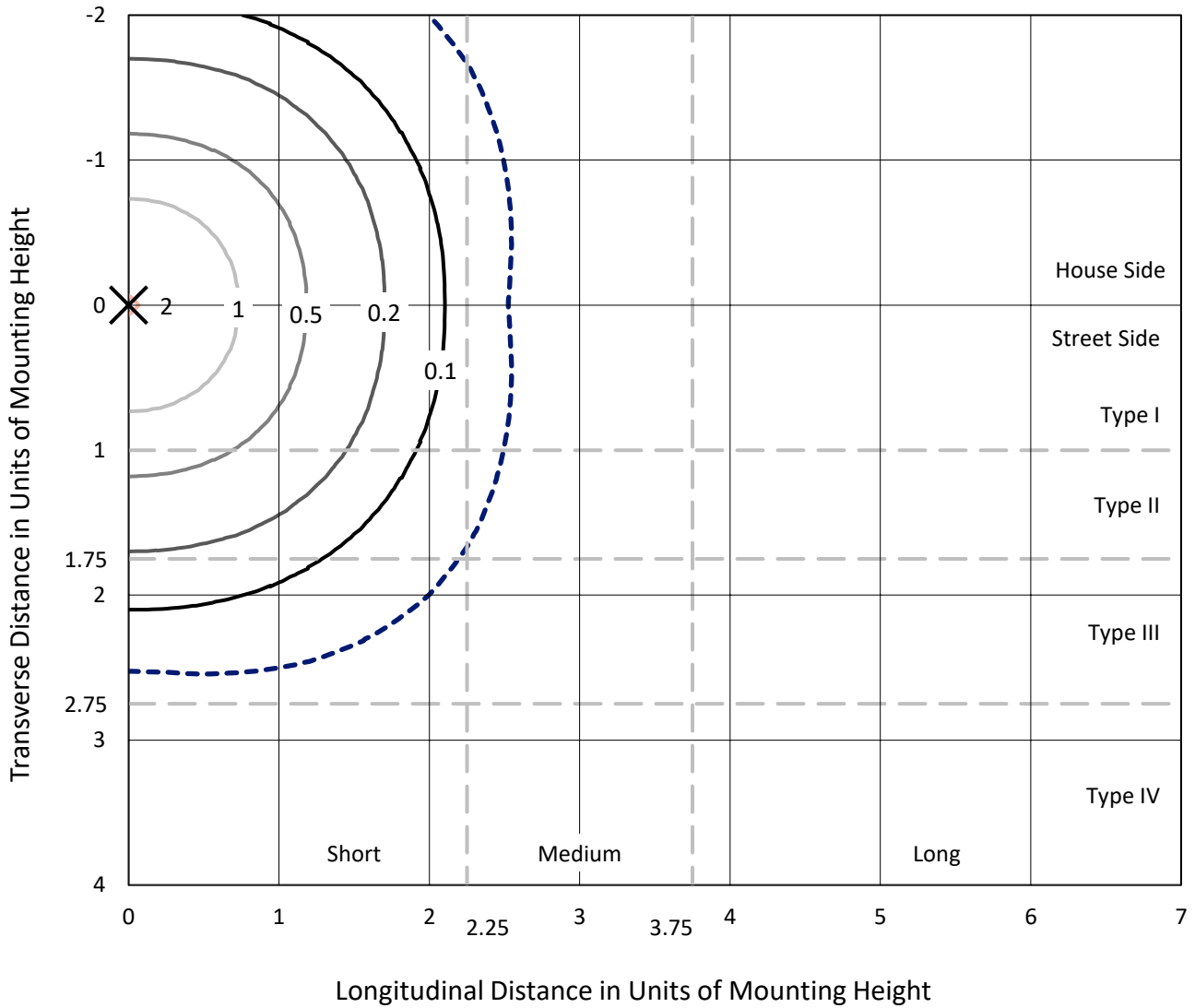
Input Watts (W): 47
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P833522
 CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

Iso-Footcandle Lines of Horizontal Illumination

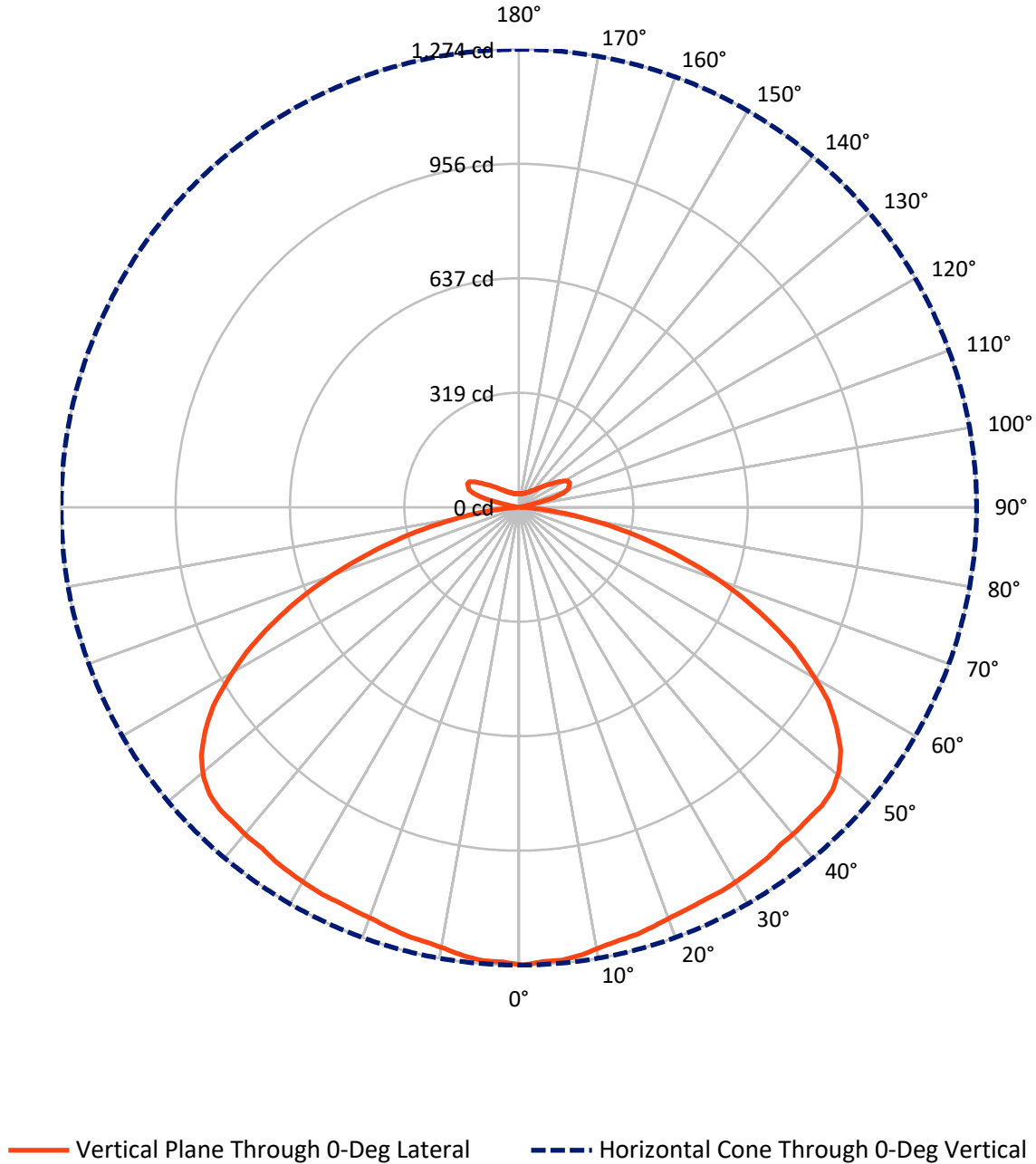
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type V - Short - N/A

REPORT NUMBER: P833522
CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

Luminous Intensity Polar Plot



REPORT NUMBER: P833522

CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

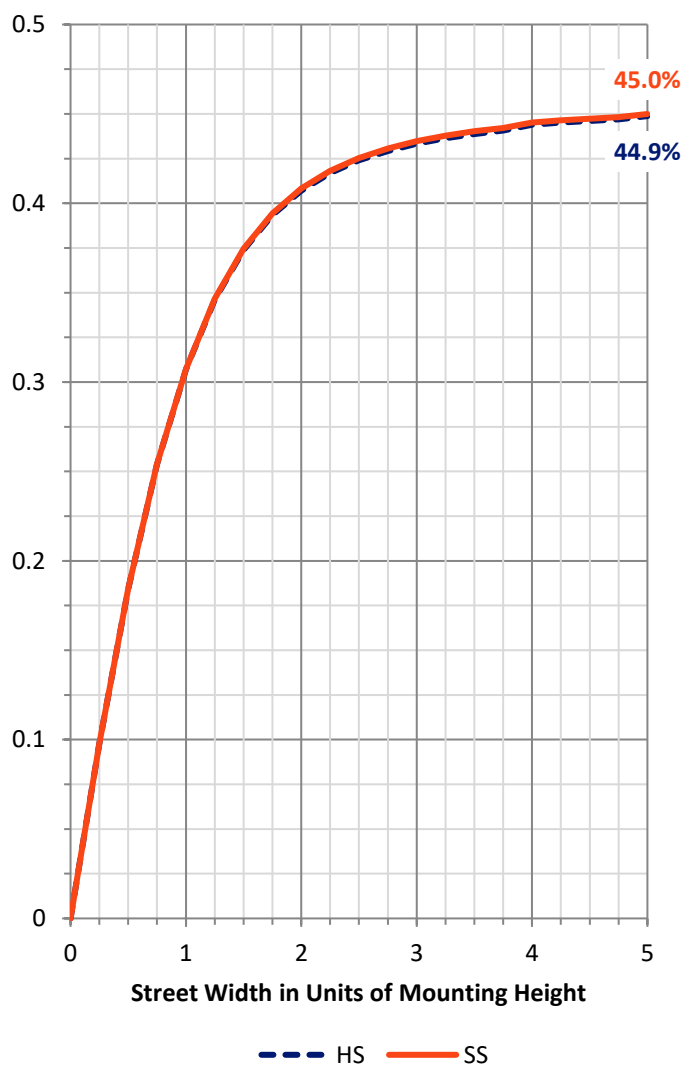
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2520.4 | 271.5 | 2791.9 |
| | % Fixture | 45.1 | 4.9 | 50.0 |
| Street Side | Lumens | 2520.4 | 271.5 | 2791.9 |
| | % Fixture | 45.1 | 4.9 | 50.0 |
| Total | Lumens | 5040.7 | 543.0 | 5583.8 |
| | % Fixture | 90.3 | 9.7 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 120.2 | 2.2 |
| 10°-20° | 348.9 | 6.2 |
| 20°-30° | 561.9 | 10.1 |
| 30°-40° | 755.7 | 13.5 |
| 40°-50° | 932.4 | 16.7 |
| 50°-60° | 1000.3 | 17.9 |
| 60°-70° | 811.2 | 14.5 |
| 70°-80° | 429.9 | 7.7 |
| 80°-90° | 80.2 | 1.4 |
| 90°-100° | 12.1 | 0.2 |
| 100°-110° | 123.2 | 2.2 |
| 110°-120° | 180.1 | 3.2 |
| 120°-130° | 104.5 | 1.9 |
| 130°-140° | 55.4 | 1.0 |
| 140°-150° | 32.9 | 0.6 |
| 150°-160° | 20.2 | 0.4 |
| 160°-170° | 11.0 | 0.2 |
| 170°-180° | 3.6 | 0.1 |
| 0°-90° | 5040.7 | 90.3 |
| 0°-180° | 5583.8 | 100.0 |

Coefficient of Utilization

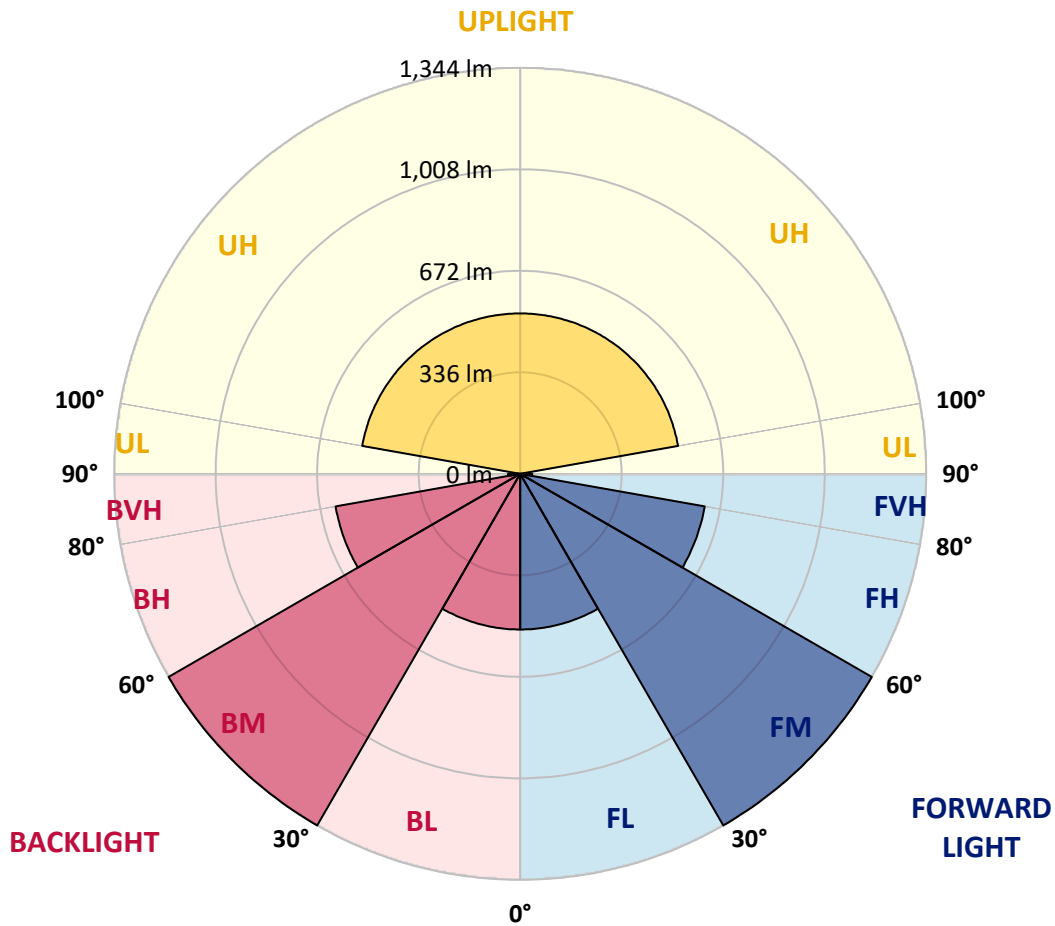


REPORT NUMBER: P833522
 CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|---------|--------|
| | | | B | U | G |
| FL (0°-30°) | 515.5 | 9.2 | | | |
| FM (30°-60°) | 1344.2 | 24.1 | | | |
| FH (60°-80°) | 620.6 | 11.1 | | | G0/660 |
| FVH (80°-90°) | 40.1 | 0.7 | | | G1/100 |
| BL (0°-30°) | 515.5 | 9.2 | B2/1000 | | |
| BM (30°-60°) | 1344.2 | 24.1 | B2/2500 | | |
| BH (60°-80°) | 620.6 | 11.1 | B2/1000 | | G0/660 |
| BVH (80°-90°) | 40.1 | 0.7 | | | G1/100 |
| UL (90°-100°) | 12.1 | 0.2 | | U2/50 | |
| UH (100°-180°) | 530.9 | 9.5 | | U4/1000 | |

BUG Rating: B2-U4-G1
 Type V Short





REPORT NUMBER: P833522

CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 | 1274.4 |
| 2.5° | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1270.3 |
| 5° | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1262.1 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 | 1266.2 |
| 7.5° | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 | 1257.9 |
| 10° | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 | 1245.6 |
| 12.5° | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 | 1237.3 |
| 15° | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1233.2 | 1229.1 | 1229.1 |
| 17.5° | 1224.9 | 1224.9 | 1224.9 | 1224.9 | 1229.1 | 1229.1 | 1229.1 | 1224.9 | 1224.9 | 1224.9 | 1224.9 |
| 20° | 1216.7 | 1216.7 | 1216.7 | 1220.8 | 1220.8 | 1220.8 | 1220.8 | 1220.8 | 1216.7 | 1216.7 | 1216.7 |
| 22.5° | 1212.6 | 1212.6 | 1212.6 | 1212.6 | 1216.7 | 1216.7 | 1216.7 | 1216.7 | 1212.6 | 1212.6 | 1212.6 |
| 25° | 1208.4 | 1208.4 | 1212.6 | 1212.6 | 1216.7 | 1216.7 | 1216.7 | 1212.6 | 1212.6 | 1208.4 | 1208.4 |
| 27.5° | 1208.4 | 1208.4 | 1212.6 | 1212.6 | 1216.7 | 1216.7 | 1216.7 | 1216.7 | 1212.6 | 1208.4 | 1208.4 |
| 30° | 1204.3 | 1208.4 | 1208.4 | 1212.6 | 1216.7 | 1216.7 | 1216.7 | 1212.6 | 1208.4 | 1204.3 | 1204.3 |
| 32.5° | 1200.2 | 1200.2 | 1204.3 | 1208.4 | 1212.6 | 1212.6 | 1212.6 | 1208.4 | 1204.3 | 1200.2 | 1196.1 |
| 35° | 1196.1 | 1196.1 | 1196.1 | 1204.3 | 1208.4 | 1208.4 | 1208.4 | 1204.3 | 1196.1 | 1191.9 | 1191.9 |
| 37.5° | 1187.8 | 1191.9 | 1196.1 | 1200.2 | 1208.4 | 1208.4 | 1208.4 | 1200.2 | 1191.9 | 1187.8 | 1183.7 |
| 40° | 1187.8 | 1187.8 | 1196.1 | 1200.2 | 1212.6 | 1212.6 | 1208.4 | 1200.2 | 1191.9 | 1183.7 | 1179.6 |
| 42.5° | 1183.7 | 1187.8 | 1196.1 | 1208.4 | 1220.8 | 1220.8 | 1216.7 | 1204.3 | 1191.9 | 1183.7 | 1179.6 |
| 45° | 1183.7 | 1183.7 | 1196.1 | 1212.6 | 1229.1 | 1233.2 | 1224.9 | 1212.6 | 1196.1 | 1179.6 | 1179.6 |
| 47.5° | 1175.5 | 1175.5 | 1191.9 | 1212.6 | 1233.2 | 1237.3 | 1233.2 | 1212.6 | 1191.9 | 1179.6 | 1175.5 |
| 50° | 1154.8 | 1154.8 | 1175.5 | 1200.2 | 1224.9 | 1233.2 | 1224.9 | 1208.4 | 1179.6 | 1163.1 | 1159.0 |
| 52.5° | 1121.8 | 1121.8 | 1142.5 | 1175.5 | 1200.2 | 1212.6 | 1204.3 | 1183.7 | 1154.8 | 1130.1 | 1126.0 |
| 55° | 1072.3 | 1076.5 | 1097.1 | 1134.2 | 1163.1 | 1175.5 | 1167.2 | 1142.5 | 1109.5 | 1084.7 | 1076.5 |
| 57.5° | 1014.6 | 1014.6 | 1043.5 | 1080.6 | 1109.5 | 1121.8 | 1113.6 | 1088.8 | 1051.7 | 1027.0 | 1018.7 |
| 60° | 936.2 | 940.4 | 965.1 | 1014.6 | 1043.5 | 1055.8 | 1047.6 | 1018.7 | 977.5 | 948.6 | 940.4 |
| 62.5° | 857.9 | 862.0 | 886.7 | 928.0 | 961.0 | 969.2 | 961.0 | 932.1 | 895.0 | 866.1 | 857.9 |
| 65° | 767.1 | 771.3 | 800.1 | 837.3 | 862.0 | 874.4 | 862.0 | 837.3 | 804.3 | 775.4 | 771.3 |
| 67.5° | 672.3 | 676.4 | 705.3 | 738.3 | 763.0 | 771.3 | 758.9 | 738.3 | 705.3 | 680.5 | 672.3 |
| 70° | 573.3 | 577.4 | 602.2 | 631.0 | 651.7 | 659.9 | 651.7 | 626.9 | 602.2 | 577.4 | 573.3 |
| 72.5° | 470.2 | 474.3 | 499.1 | 523.8 | 540.3 | 548.5 | 536.2 | 519.7 | 494.9 | 474.3 | 470.2 |
| 75° | 371.2 | 371.2 | 391.8 | 412.4 | 428.9 | 433.1 | 424.8 | 412.4 | 391.8 | 375.3 | 367.1 |
| 77.5° | 276.3 | 276.3 | 297.0 | 309.3 | 317.6 | 325.8 | 317.6 | 305.2 | 292.8 | 276.3 | 276.3 |
| 80° | 185.6 | 185.6 | 202.1 | 210.3 | 218.6 | 222.7 | 218.6 | 210.3 | 202.1 | 189.7 | 185.6 |
| 82.5° | 111.4 | 111.4 | 119.6 | 127.9 | 127.9 | 132.0 | 132.0 | 127.9 | 119.6 | 111.4 | 111.4 |
| 85° | 49.5 | 45.4 | 53.6 | 57.7 | 57.7 | 61.9 | 61.9 | 57.7 | 53.6 | 49.5 | 49.5 |
| 87.5° | 4.1 | 8.2 | 8.2 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 8.2 | 8.2 | 8.2 |
| 90° | 4.6 | 4.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 4.6 | 4.6 |
| 92.5° | 4.6 | 4.6 | 4.6 | 6.5 | 7.4 | 6.5 | 7.4 | 5.6 | 5.6 | 4.6 | 4.6 |
| 95° | 5.6 | 5.6 | 6.5 | 8.4 | 10.2 | 11.1 | 11.1 | 6.5 | 6.5 | 5.6 | 5.6 |
| 97.5° | 7.4 | 8.4 | 8.4 | 10.2 | 16.7 | 30.7 | 18.6 | 9.3 | 9.3 | 8.4 | 7.4 |
| 100° | 12.1 | 13.0 | 13.0 | 23.2 | 49.2 | 66.0 | 47.4 | 24.2 | 17.7 | 13.0 | 13.0 |
| 102.5° | 39.0 | 40.9 | 50.2 | 75.3 | 111.5 | 101.3 | 85.5 | 80.8 | 55.7 | 44.6 | 42.7 |
| 105° | 99.4 | 98.5 | 105.9 | 125.4 | 156.1 | 153.3 | 141.2 | 128.2 | 110.6 | 102.2 | 102.2 |
| 107.5° | 131.0 | 131.0 | 137.5 | 154.2 | 177.4 | 207.2 | 210.0 | 166.3 | 145.9 | 136.6 | 135.6 |
| 110° | 147.7 | 147.7 | 153.3 | 167.2 | 197.9 | 239.7 | 237.8 | 205.3 | 180.2 | 168.2 | 166.3 |



REPORT NUMBER: P833522
 CATALOG NUMBER: TTN-D2-735-U-CQ-UPL2

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 151.4 | 152.4 | 159.8 | 181.2 | 214.6 | 233.2 | 224.8 | 211.8 | 200.7 | 191.4 | 189.5 |
| 115° | 157.0 | 157.0 | 165.4 | 185.8 | 204.4 | 211.8 | 202.5 | 192.3 | 184.9 | 181.2 | 183.0 |
| 117.5° | 155.1 | 157.9 | 159.8 | 170.9 | 183.0 | 188.6 | 183.9 | 170.0 | 164.4 | 162.6 | 159.8 |
| 120° | 144.0 | 144.0 | 145.9 | 151.4 | 157.9 | 160.7 | 158.9 | 149.6 | 144.9 | 144.0 | 142.1 |
| 122.5° | 128.2 | 129.1 | 128.2 | 131.0 | 135.6 | 138.4 | 136.6 | 129.1 | 127.3 | 127.3 | 125.4 |
| 125° | 112.4 | 112.4 | 111.5 | 113.3 | 116.1 | 115.2 | 116.1 | 112.4 | 111.5 | 111.5 | 110.6 |
| 127.5° | 101.3 | 100.3 | 98.5 | 99.4 | 100.3 | 100.3 | 101.3 | 97.5 | 98.5 | 99.4 | 98.5 |
| 130° | 90.1 | 90.1 | 88.3 | 88.3 | 88.3 | 86.4 | 88.3 | 86.4 | 87.3 | 88.3 | 89.2 |
| 132.5° | 79.9 | 79.9 | 77.1 | 76.2 | 76.2 | 76.2 | 77.1 | 76.2 | 78.0 | 79.9 | 79.9 |
| 135° | 71.5 | 71.5 | 68.7 | 69.7 | 69.7 | 68.7 | 69.7 | 68.7 | 70.6 | 71.5 | 71.5 |
| 137.5° | 65.0 | 65.0 | 63.2 | 63.2 | 63.2 | 62.2 | 63.2 | 63.2 | 64.1 | 66.0 | 66.9 |
| 140° | 59.5 | 59.5 | 58.5 | 58.5 | 57.6 | 58.5 | 58.5 | 58.5 | 59.5 | 60.4 | 60.4 |
| 142.5° | 56.7 | 55.7 | 54.8 | 53.9 | 54.8 | 54.8 | 54.8 | 53.9 | 54.8 | 56.7 | 56.7 |
| 145° | 52.0 | 52.0 | 51.1 | 51.1 | 51.1 | 52.0 | 51.1 | 51.1 | 52.0 | 52.0 | 53.0 |
| 147.5° | 49.2 | 49.2 | 48.3 | 49.2 | 49.2 | 49.2 | 49.2 | 48.3 | 49.2 | 49.2 | 50.2 |
| 150° | 48.3 | 47.4 | 46.5 | 47.4 | 47.4 | 46.5 | 46.5 | 46.5 | 46.5 | 47.4 | 47.4 |
| 152.5° | 45.5 | 45.5 | 44.6 | 45.5 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 45.5 | 46.5 |
| 155° | 43.7 | 43.7 | 42.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 |
| 157.5° | 41.8 | 42.7 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 42.7 | 42.7 |
| 160° | 40.9 | 40.9 | 40.9 | 40.9 | 39.9 | 39.9 | 39.9 | 40.9 | 40.9 | 40.9 | 41.8 |
| 162.5° | 39.9 | 39.9 | 39.9 | 39.9 | 39.0 | 39.0 | 39.0 | 39.0 | 39.9 | 39.9 | 40.9 |
| 165° | 39.9 | 39.0 | 39.0 | 39.0 | 38.1 | 38.1 | 38.1 | 38.1 | 39.0 | 39.9 | 39.0 |
| 167.5° | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 38.1 | 38.1 | 38.1 | 39.0 |
| 170° | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 38.1 |
| 172.5° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 38.1 | 38.1 |
| 175° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 38.1 | 38.1 | 38.1 | 37.2 |
| 177.5° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 |
| 180° | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 |

(END OF REPORT)