

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: LUMARK

Report Number: P270427

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7027-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270427  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL2-7027-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8457.4 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 96  
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

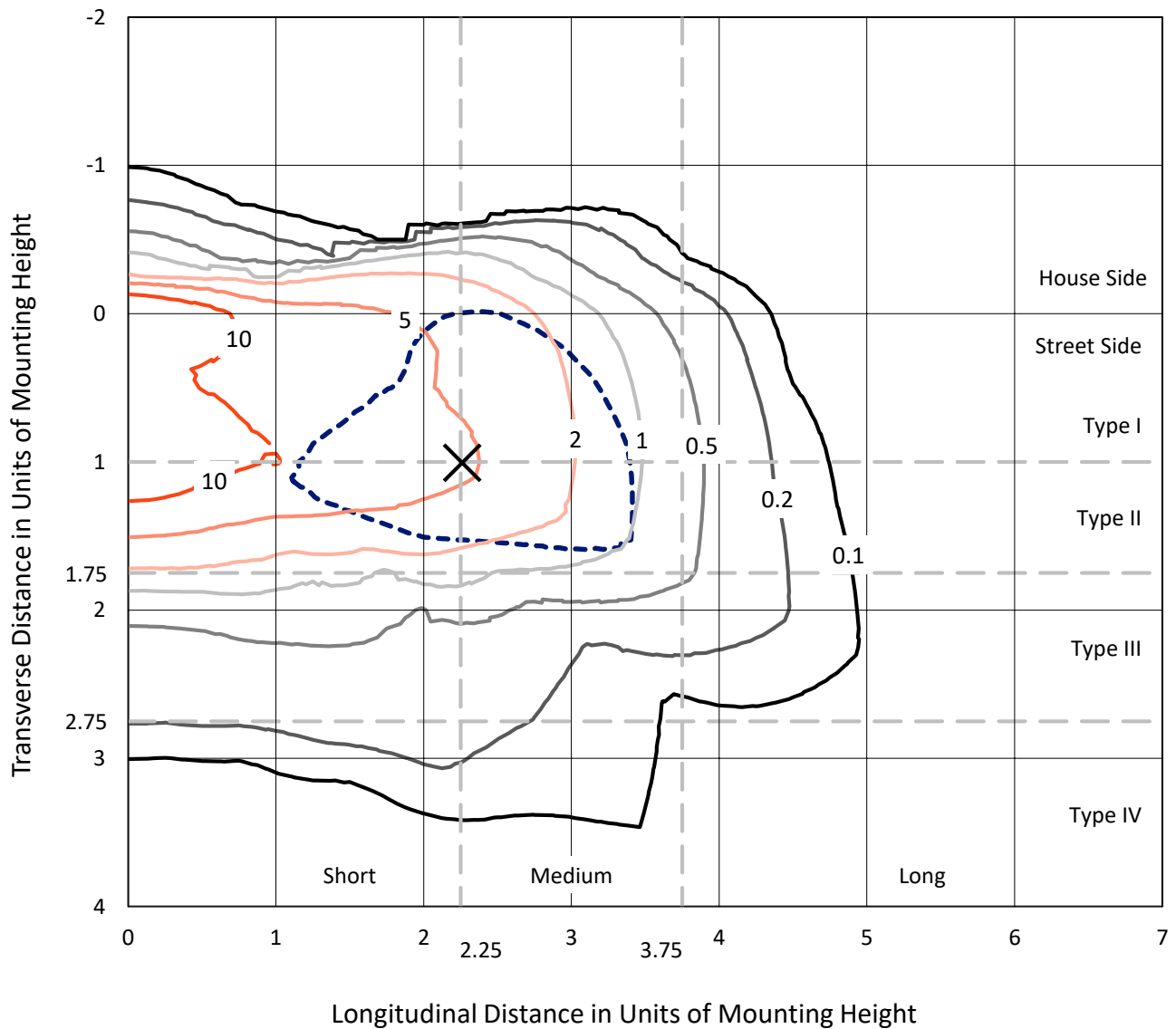


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

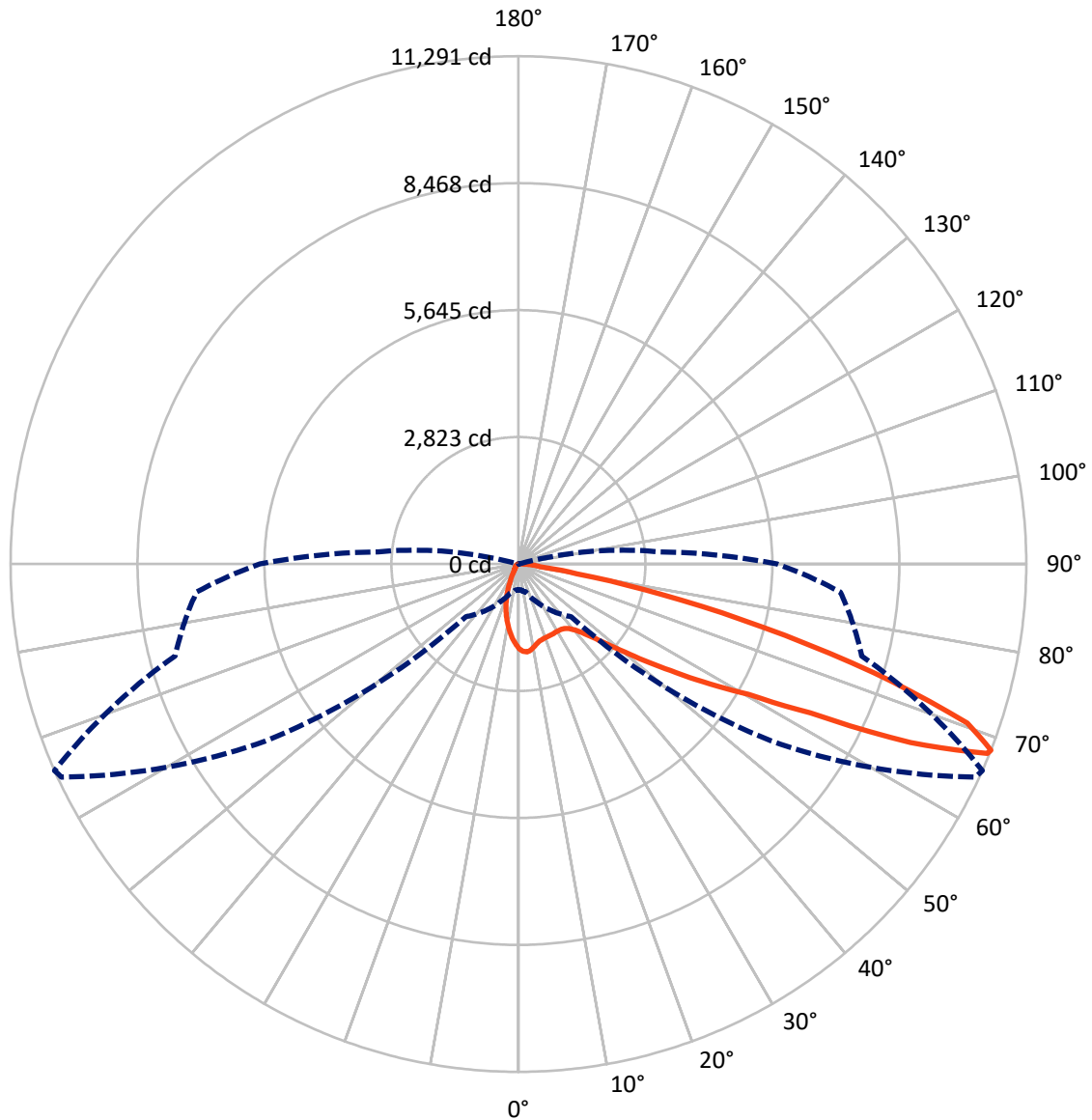


Based on 10 foot mounting height. Maximum calculated value = 18.8 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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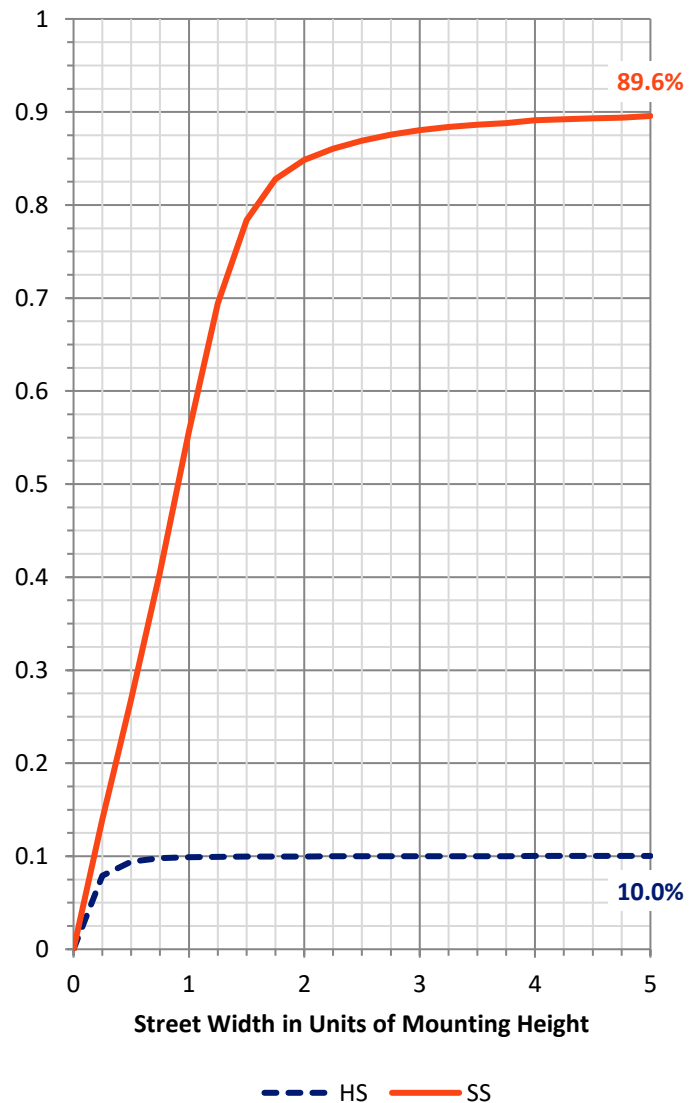
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	856.6	0.0	856.6
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	7600.8	0.0	7600.8
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	8457.4	0.0	8457.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.5	1.8
10°-20°	332.3	3.9
20°-30°	481.6	5.7
30°-40°	737.3	8.7
40°-50°	1261.0	14.9
50°-60°	1972.6	23.3
60°-70°	2271.4	26.9
70°-80°	1136.6	13.4
80°-90°	110.1	1.3
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°	8457.4	100.0
0°-180°	8457.4	100.0

**Coefficient of Utilization**



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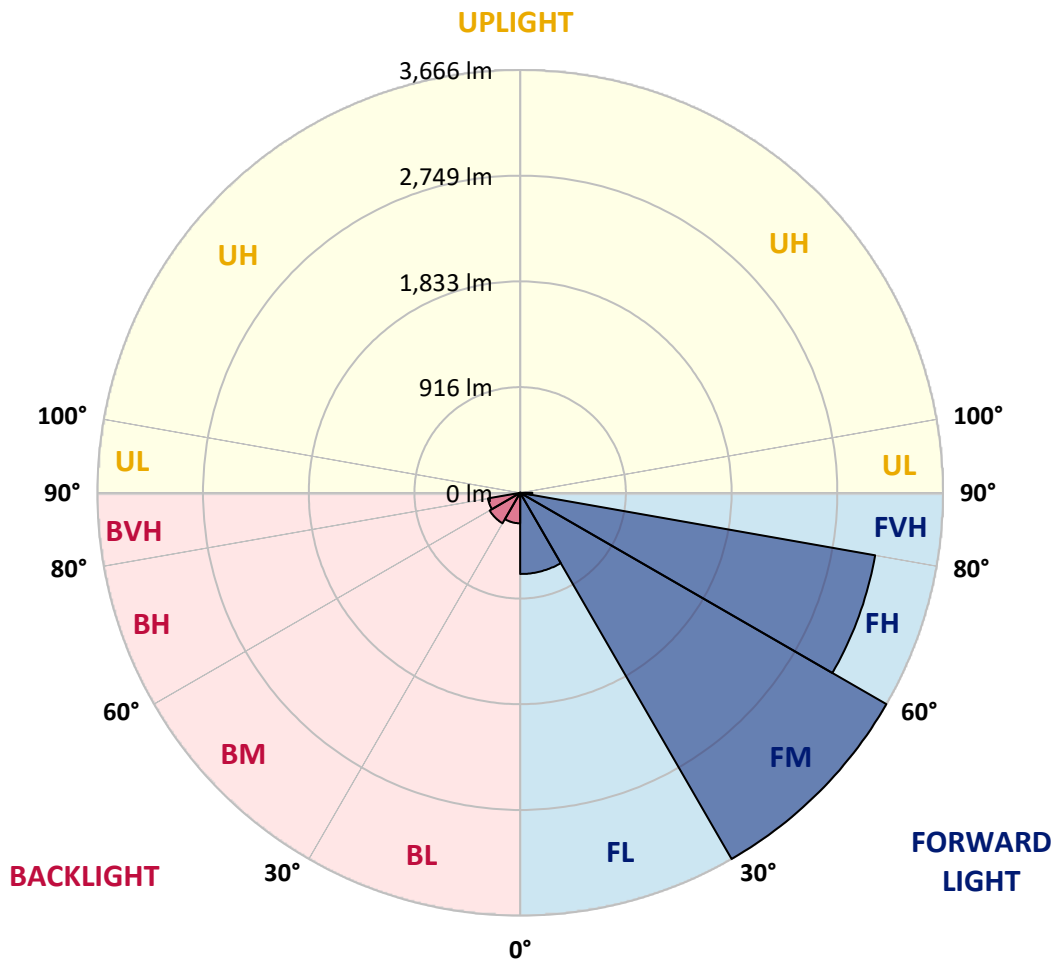
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	704.0	8.3			
FM (30°-60°)	3665.8	43.3			
FH (60°-80°)	3125.0	36.9			G2/5000
FVH (80°-90°)	105.9	1.3			G2/225
BL (0°-30°)	264.4	3.1	B1/500		
BM (30°-60°)	305.1	3.6	B1/1000		
BH (60°-80°)	283.0	3.3	B1/500		G1/500
BVH (80°-90°)	4.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3
2.5°	1981.8	1983.2	1982.5	1984.4	1983.2	1973.1	1962.5	1940.0	1942.0	1912.9	1880.2
5°	1842.5	1853.7	1865.1	1876.3	1903.5	1927.5	1955.9	1962.5	1962.5	1937.4	1889.6
7.5°	1700.3	1701.0	1713.5	1728.9	1765.3	1809.1	1875.7	1935.4	1936.7	1943.4	1890.9
10°	1593.5	1596.7	1605.5	1622.0	1658.5	1701.7	1775.9	1869.6	1876.9	1926.1	1877.5
12.5°	1510.4	1514.5	1523.7	1543.0	1576.2	1620.6	1699.1	1806.0	1815.8	1909.4	1873.7
15°	1446.7	1452.0	1459.3	1478.6	1514.5	1561.6	1647.2	1763.5	1775.3	1902.8	1886.3
17.5°	1420.1	1420.1	1419.5	1432.7	1468.5	1516.3	1606.1	1740.8	1756.0	1908.1	1907.6
20°	1431.4	1429.5	1415.5	1412.1	1434.1	1481.9	1573.6	1726.3	1743.5	1918.2	1933.3
22.5°	1491.1	1487.2	1456.1	1430.1	1423.5	1455.3	1551.6	1716.2	1736.9	1938.7	1967.8
25°	1617.9	1606.1	1563.0	1504.5	1452.0	1448.6	1536.3	1710.9	1732.9	1962.5	2005.7
27.5°	1782.6	1779.4	1710.4	1632.0	1531.0	1470.6	1531.7	1707.0	1728.9	1979.9	2036.3
30°	1987.1	1988.5	1908.8	1806.5	1653.9	1532.4	1546.3	1705.0	1727.5	1981.1	2049.6
32.5°	2198.3	2199.6	2133.3	2023.6	1821.9	1638.6	1587.5	1714.2	1734.8	1975.8	2048.9
35°	2401.3	2403.4	2363.6	2275.2	2046.2	1786.0	1665.2	1746.1	1760.8	1979.1	2047.5
37.5°	2658.4	2666.3	2617.2	2534.8	2327.8	2002.4	1791.9	1810.5	1822.5	2006.5	2057.5
40°	3096.5	3085.9	2945.3	2805.8	2633.1	2266.0	1975.3	1921.5	1925.3	2076.8	2095.3
42.5°	3607.1	3593.8	3352.8	3112.4	2947.2	2584.1	2209.7	2091.3	2090.7	2195.0	2177.8
45°	4046.7	4038.7	3785.1	3464.5	3295.2	2935.2	2498.4	2336.4	2328.3	2399.5	2327.8
47.5°	4358.7	4352.1	4160.2	3838.8	3697.5	3321.7	2858.9	2670.3	2653.8	2667.0	2571.4
50°	4389.3	4381.9	4314.9	4108.4	4167.4	3888.7	3304.3	3107.9	3086.7	3066.1	2940.0
52.5°	4103.7	4103.1	4138.3	4124.9	4496.7	4618.2	3850.9	3648.9	3623.8	3571.3	3445.8
55°	3520.2	3516.9	3650.4	3844.1	4489.5	5371.1	4684.0	4293.0	4259.9	4154.9	3990.2
57.5°	2572.0	2554.8	2833.7	3244.6	4174.2	5700.6	6007.2	5093.0	5038.0	4705.3	4451.6
60°	1420.1	1426.8	1785.3	2272.0	3427.3	5635.4	7224.9	6025.8	5881.2	5179.9	4924.4
62.5°	796.1	812.6	1079.6	1476.5	2184.9	5107.7	7878.1	7631.2	7282.6	5733.7	5521.9
65°	602.1	612.1	746.2	1139.3	1377.6	3569.2	7982.3	9876.0	9575.3	6572.9	6473.4
67.5°	567.0	574.9	640.8	944.7	1254.8	1851.0	7197.7	11203.8	11241.7	7717.5	7210.2
68°	571.1	580.9	646.7	908.9	1252.9	1655.8	6863.1	11210.5	11290.7	7902.1	7185.1
70°	524.5	527.1	683.9	891.7	1214.2	1304.6	4964.8	10442.3	10586.3	8121.8	6522.5
72.5°	200.5	201.2	306.7	772.2	1272.1	1312.0	2501.1	8253.3	8260.6	7068.3	5085.0
75°	104.3	87.7	96.3	241.6	1215.0	1278.7	1254.8	5635.4	5600.3	4780.3	3115.9
77.5°	71.8	61.1	64.4	83.6	505.2	1278.1	906.3	3240.6	3233.3	2033.7	889.1
80°	40.6	35.3	38.4	70.3	177.2	1199.7	844.5	1392.9	1312.7	357.2	144.1
82.5°	20.7	17.2	20.7	59.1	110.2	754.8	821.3	546.3	486.6	85.0	93.7
85°	5.3	5.3	9.9	41.1	68.5	247.7	736.3	394.4	354.6	37.2	66.4
87.5°	1.3	0.7	4.0	15.4	24.6	53.8	408.3	219.7	189.3	19.3	38.4
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3	1884.3
2.5°	1866.9	1848.4	1811.9	1770.6	1741.5	1709.7	1691.0	1668.4	1651.2	1636.0	1647.2
5°	1860.3	1824.5	1743.5	1652.5	1576.2	1503.1	1448.6	1397.0	1357.8	1333.2	1343.1
7.5°	1843.1	1790.0	1658.5	1516.3	1391.7	1274.1	1178.4	1092.8	1026.5	990.7	1001.9
10°	1813.9	1738.8	1562.2	1365.1	1190.4	1024.4	882.3	754.8	658.5	613.5	624.1
12.5°	1792.6	1693.7	1462.6	1219.0	989.3	753.6	565.0	418.9	344.0	298.7	302.8
15°	1783.3	1658.5	1369.6	1064.9	769.5	483.9	305.5	221.2	195.2	185.9	186.6
17.5°	1784.7	1630.7	1281.4	905.0	547.7	278.1	187.2	168.6	164.7	162.7	162.7
20°	1787.9	1602.8	1189.7	738.2	350.6	179.2	156.0	150.0	148.1	145.3	146.1
22.5°	1797.9	1581.5	1097.5	571.1	215.8	146.1	138.1	132.8	129.4	125.6	126.1
25°	1813.1	1565.6	1006.6	411.0	152.1	127.5	120.2	112.8	106.9	102.2	102.9
27.5°	1822.5	1543.0	909.5	280.2	126.1	111.5	101.6	91.6	85.0	80.9	80.4
30°	1815.8	1506.5	799.4	184.0	111.5	96.3	84.4	73.0	66.4	63.2	63.2
32.5°	1797.9	1459.3	678.0	134.0	99.0	83.1	68.5	58.4	53.8	51.8	52.5
35°	1777.3	1410.2	548.4	113.5	88.9	70.3	55.8	47.8	45.9	45.2	45.2
37.5°	1766.1	1367.7	424.3	102.9	79.7	58.4	45.9	41.1	39.2	39.2	39.2
40°	1778.6	1335.2	314.0	95.0	70.3	48.5	38.4	35.3	34.6	34.6	34.6
42.5°	1832.5	1323.9	229.7	88.4	61.1	40.6	33.1	30.5	29.9	30.5	30.5
45°	1937.4	1348.4	173.9	81.7	52.5	33.1	28.6	26.6	26.6	27.2	27.2
47.5°	2115.2	1411.4	142.7	75.0	43.7	27.8	24.6	23.3	23.3	24.0	24.0
50°	2391.5	1528.3	128.2	67.7	36.6	24.0	20.7	19.9	19.9	20.7	21.2
52.5°	2811.1	1750.7	120.8	60.5	29.9	19.9	17.2	16.6	17.2	18.0	18.0
55°	3277.8	2035.6	112.2	53.1	25.2	16.6	14.0	14.0	14.6	15.9	15.9
57.5°	3712.7	2310.5	104.3	43.7	21.9	13.2	11.3	11.3	12.7	14.0	14.0
60°	4172.2	2580.0	93.7	35.3	18.5	10.6	9.3	9.3	11.3	12.7	13.2
62.5°	4739.7	2893.4	79.7	27.8	14.6	7.9	6.6	8.7	10.6	12.7	12.7
65°	5560.4	3283.1	62.4	21.9	11.3	6.0	5.3	7.9	9.9	11.9	12.7
67.5°	5858.6	3233.3	47.2	18.0	8.7	4.6	4.6	7.2	9.9	11.9	11.9
68°	5749.6	3124.5	45.2	17.2	7.9	4.6	4.6	7.2	9.9	11.9	11.9
70°	5009.9	2554.2	37.2	13.2	6.6	4.0	4.0	6.6	9.9	11.3	11.9
72.5°	3751.2	1697.0	31.9	8.7	6.0	4.0	3.4	6.6	9.3	11.3	11.3
75°	2151.8	704.5	27.2	6.6	5.3	3.4	3.4	6.0	9.3	11.3	11.3
77.5°	608.2	164.7	21.9	5.3	4.6	3.4	2.6	6.0	8.7	10.6	10.6
80°	111.5	49.1	17.2	4.6	4.0	3.4	2.6	6.0	8.7	10.6	10.6
82.5°	73.8	23.3	12.7	4.6	4.0	3.4	2.6	5.3	7.9	9.9	9.9
85°	55.1	16.6	7.9	4.6	4.0	3.4	2.6	5.3	7.9	9.9	9.9
87.5°	30.5	7.2	6.0	5.3	4.6	3.4	2.6	4.6	7.2	9.3	9.3
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)