

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: P966181

Luminaire Tested: **NAV-SB4B-740-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-740-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24927 lumens
Efficiency: N/A
Efficacy: 169.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

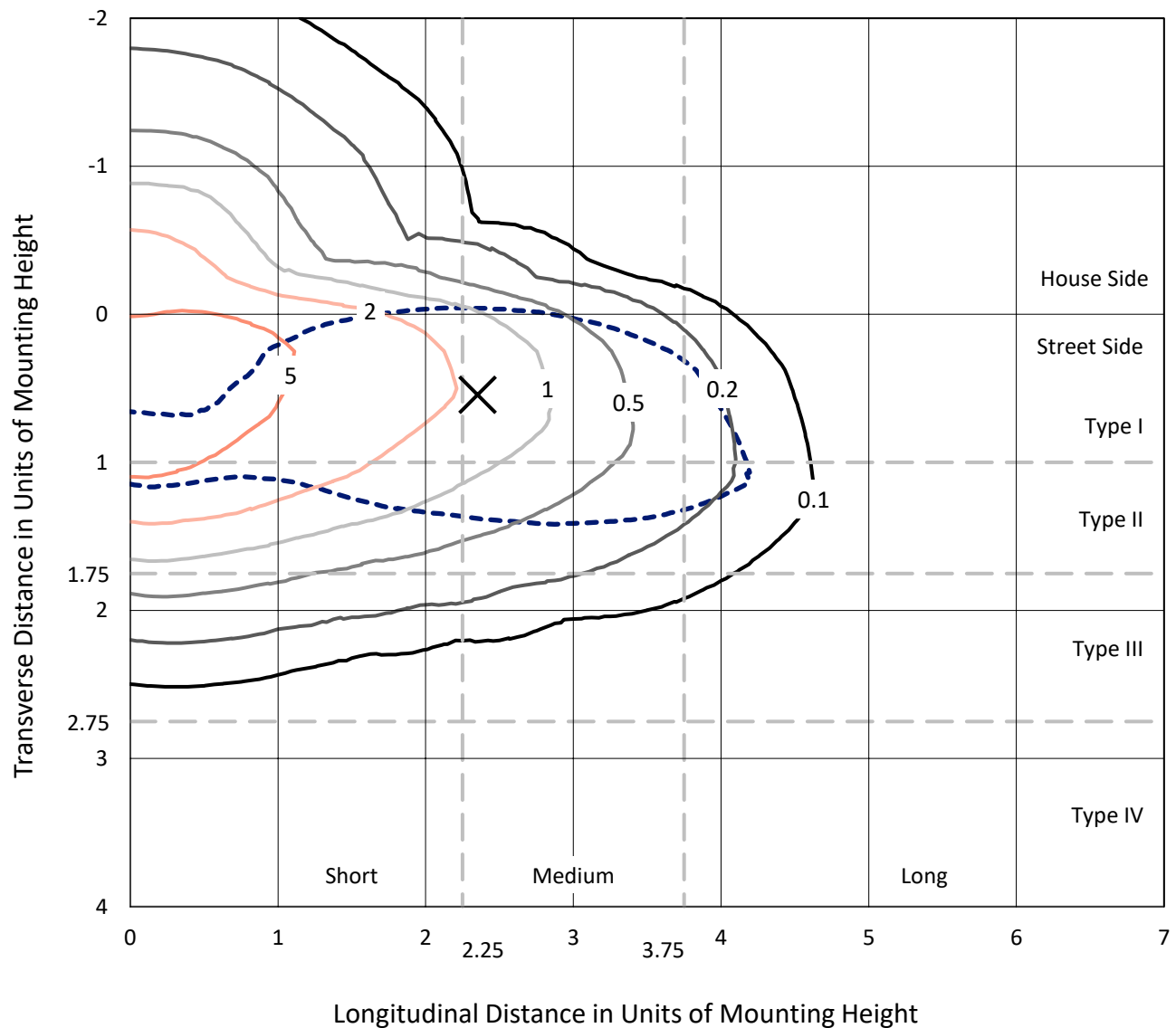
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

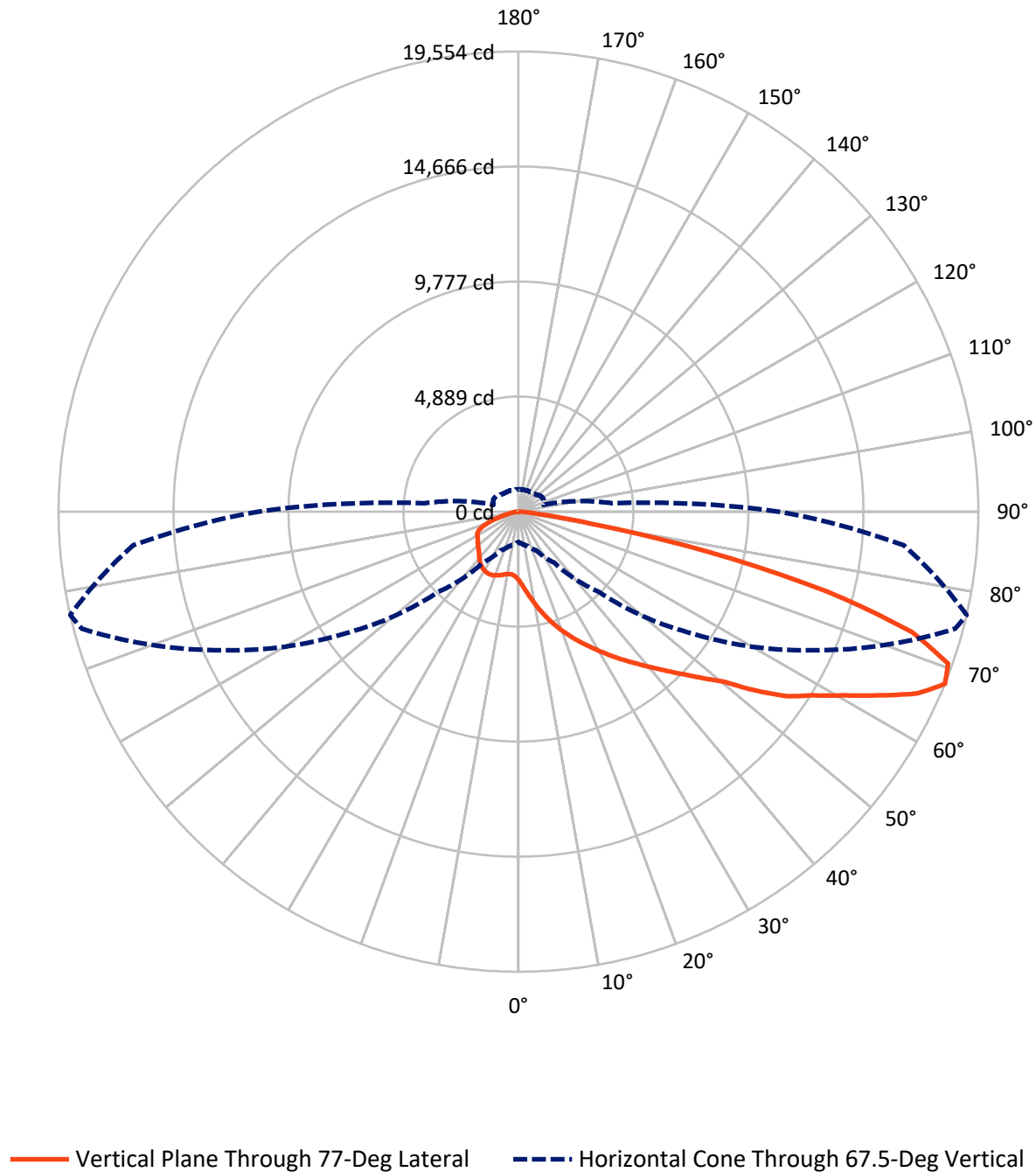
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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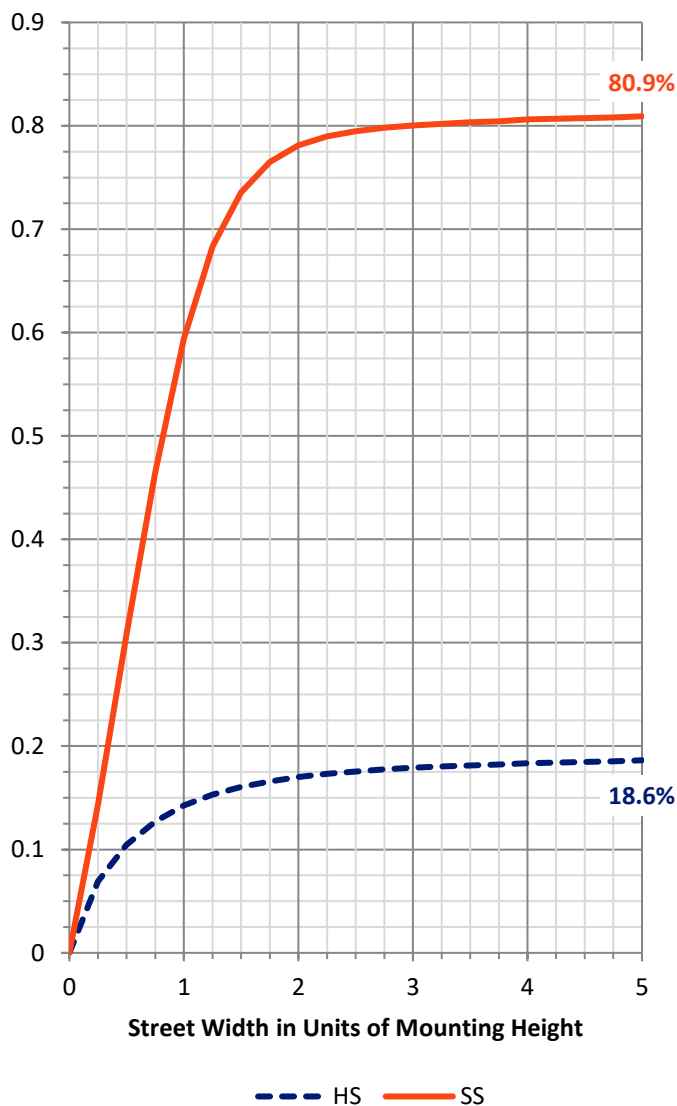
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4715.2	0.0	4715.2
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	20211.8	0.0	20211.8
	% Fixture	81.1	0.0	81.1
Total	Lumens	24927.0	0.0	24927.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.5	1.3
10°-20°	1126.2	4.5
20°-30°	2126.5	8.5
30°-40°	3425.7	13.7
40°-50°	4685.7	18.8
50°-60°	5285.5	21.2
60°-70°	4933.4	19.8
70°-80°	2704.3	10.8
80°-90°	326.2	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°	24927.0	100.0
0°-180°	24927.0	100.0

Coefficient of Utilization



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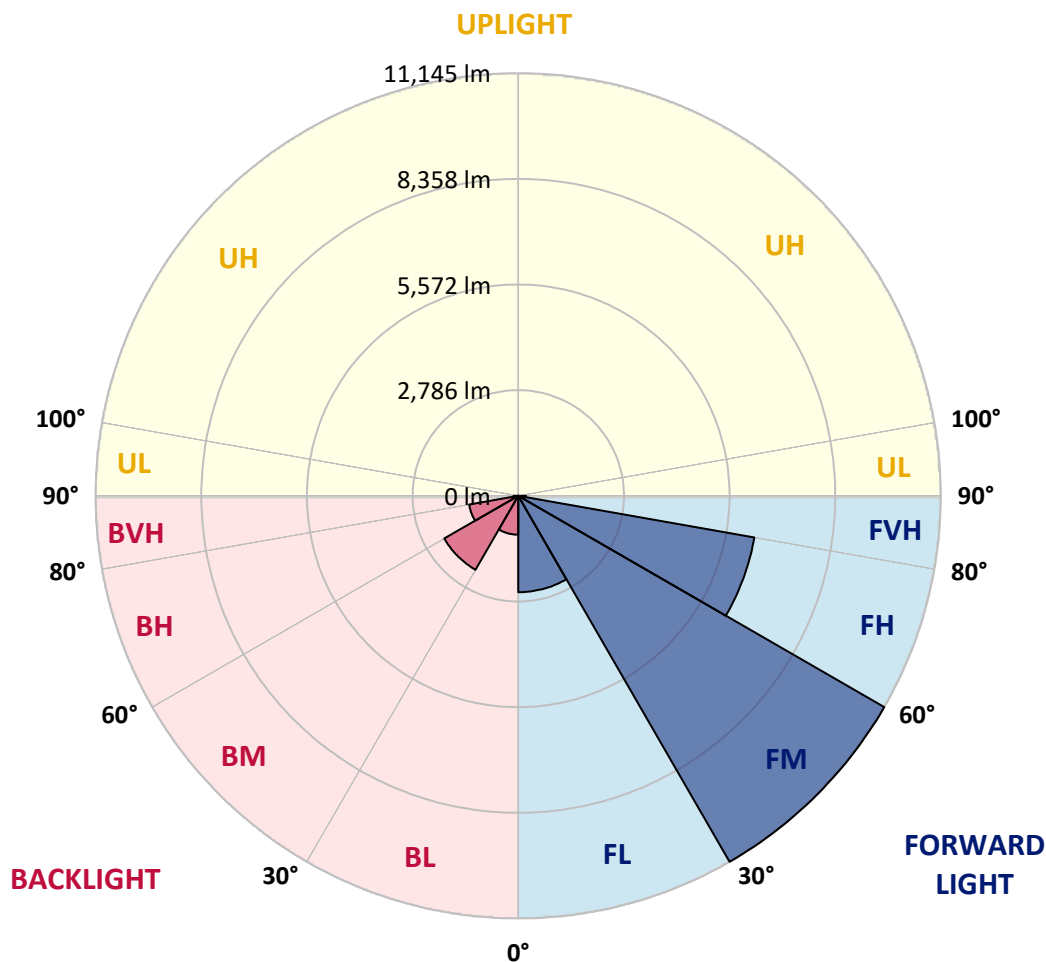
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2541.0	10.2			
FM	(30°-60°)	11144.6	44.7			
FH	(60°-80°)	6322.2	25.4			G3/7500
FVH	(80°-90°)	204.0	0.8			G2/225
BL	(0°-30°)	1025.2	4.1	B3/2500		
BM	(30°-60°)	2252.3	9.0	B2/2500		
BH	(60°-80°)	1315.5	5.3	B3/2500		G3/2500
BVH	(80°-90°)	122.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7
2.5°	3662.0	3687.7	3655.6	3655.6	3547.5	3490.8	3382.8	3300.4	3152.5	3126.8	3029.0
5°	4328.5	4360.7	4315.7	4296.4	4169.0	4051.8	3870.4	3691.6	3427.8	3400.7	3170.4
7.5°	4844.5	4885.7	4845.8	4825.2	4711.9	4580.7	4368.4	4118.8	3746.9	3694.2	3360.9
10°	5265.2	5271.7	5258.9	5266.6	5177.8	5069.6	4852.2	4561.5	4096.9	4024.9	3591.2
12.5°	5503.3	5532.8	5558.6	5604.9	5589.5	5522.6	5327.0	4979.6	4467.5	4374.8	3842.1
15°	5615.3	5666.7	5724.6	5831.4	5917.6	5934.3	5785.1	5428.7	4844.5	4732.5	4095.6
17.5°	5655.1	5704.0	5795.3	5949.8	6135.0	6259.9	6192.9	5864.8	5217.7	5088.9	4362.0
20°	5857.2	5871.3	5926.7	6073.3	6274.0	6481.2	6531.4	6284.4	5587.0	5441.5	4637.3
22.5°	6289.5	6261.2	6276.6	6343.5	6487.6	6688.3	6802.9	6654.9	5966.5	5799.2	4915.3
25°	7003.6	6921.2	6838.9	6761.7	6835.0	6948.3	7078.2	7025.5	6364.1	6151.8	5195.7
27.5°	7905.6	7805.3	7623.8	7370.4	7281.5	7321.5	7379.3	7369.0	6732.1	6517.3	5485.3
30°	8793.5	8676.3	8460.1	8093.5	7859.3	7753.7	7710.0	7680.4	7132.3	6903.3	5777.3
32.5°	9502.4	9409.8	9197.4	8787.0	8447.3	8267.1	8121.8	8016.2	7550.5	7321.5	6086.1
35°	10122.6	10036.4	9793.2	9345.4	8976.1	8784.5	8594.0	8368.8	7985.4	7753.7	6418.1
37.5°	10688.8	10602.6	10269.3	9803.5	9431.6	9299.1	9129.3	8747.1	8421.6	8202.9	6769.4
40°	11046.4	11027.2	10715.8	10188.2	9802.2	9736.6	9680.0	9185.8	8905.4	8702.0	7155.4
42.5°	11137.9	11180.3	10933.3	10499.6	10131.6	10078.8	10211.4	9682.6	9448.3	9254.1	7592.9
45°	10917.8	11040.1	10877.9	10583.2	10365.8	10337.5	10682.3	10225.5	10049.3	9871.7	8120.5
47.5°	10360.6	10567.9	10500.9	10459.7	10428.9	10551.0	11096.6	10802.0	10729.9	10575.5	8722.6
50°	9236.1	9628.5	9745.6	10005.5	10304.0	10717.1	11473.6	11431.2	11525.1	11369.4	9456.0
52.5°	7291.8	7832.2	8511.6	9162.7	9920.6	10661.7	11887.9	12334.4	12730.8	12645.8	10621.9
55°	6019.3	6262.4	6784.9	7978.9	9176.8	10428.9	12074.6	13064.0	13927.4	13851.5	11505.8
57.5°	5041.4	5258.9	5580.5	6577.7	8052.3	9900.0	12190.3	13509.3	14747.1	14739.4	12378.2
60°	3992.7	4223.0	4552.4	5258.9	6738.6	8986.5	12164.6	14016.3	15793.2	15857.5	13442.4
62.5°	2808.9	3062.4	3427.8	4086.6	5396.5	7802.6	11639.7	14382.9	17024.5	17199.5	14722.6
65°	1846.4	2013.7	2289.0	2857.8	4021.0	6280.5	10637.2	14430.6	18342.2	18638.1	15924.4
67.5°	1294.5	1358.7	1520.9	1829.7	2650.6	4816.2	9040.5	13937.7	19221.0	19554.2	16445.5
70°	1010.0	1042.2	1124.6	1248.1	1665.0	3238.7	6927.7	12656.2	19033.1	19380.5	15901.2
72.5°	872.4	903.2	934.2	949.6	1116.8	1999.6	4692.7	10582.0	17263.9	17499.3	13825.8
75°	791.3	799.1	824.8	819.6	851.8	1297.0	2708.6	7710.0	13621.2	13540.1	10206.2
77.5°	665.2	675.6	718.0	711.6	756.6	886.5	1406.4	4975.8	8830.8	8280.1	5680.9
80°	563.5	568.8	615.0	607.3	657.5	642.1	718.0	2536.2	3745.7	3173.1	1637.9
82.5°	195.6	241.9	469.7	483.8	501.8	388.6	414.3	1034.5	1143.9	876.3	343.6
85°	95.2	101.7	239.3	339.7	338.5	195.6	202.0	369.3	360.3	283.1	114.5
87.5°	15.5	19.3	28.3	132.5	105.5	51.5	69.5	72.1	74.6	64.4	25.7
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°	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7	2924.7
2.5°	2956.9	2892.5	2757.5	2632.6	2534.8	2440.9	2388.1	2343.1	2317.4	2312.2	2312.2
5°	3036.7	2904.1	2658.3	2451.2	2316.1	2215.7	2163.0	2129.5	2112.8	2102.5	2101.2
7.5°	3151.2	2956.9	2606.9	2371.4	2229.9	2157.8	2130.8	2125.6	2124.4	2125.6	2129.5
10°	3309.4	3043.1	2601.8	2352.2	2233.8	2193.8	2192.6	2193.8	2199.0	2200.3	2201.6
12.5°	3480.6	3131.9	2622.4	2368.9	2282.7	2260.7	2256.9	2255.6	2259.5	2262.1	2263.3
15°	3667.1	3248.9	2657.1	2404.9	2336.7	2313.5	2309.6	2301.9	2300.6	2299.4	2298.0
17.5°	3858.8	3364.8	2695.6	2443.5	2371.4	2339.3	2325.1	2307.1	2292.9	2289.0	2292.9
20°	4053.2	3479.3	2722.7	2462.8	2374.0	2329.0	2300.6	2269.8	2245.4	2231.1	2236.3
22.5°	4260.3	3599.0	2739.4	2457.6	2350.8	2289.0	2237.6	2201.6	2164.3	2139.8	2141.1
25°	4462.3	3703.2	2738.2	2430.6	2305.8	2227.3	2161.7	2115.4	2063.9	2038.1	2038.1
27.5°	4656.7	3797.1	2706.0	2383.0	2241.5	2153.9	2075.5	2020.2	1969.9	1945.6	1944.2
30°	4857.4	3875.6	2655.8	2313.5	2165.5	2069.1	1982.9	1935.2	1890.2	1867.0	1865.7
32.5°	5056.8	3947.7	2585.0	2227.3	2078.1	1985.4	1900.5	1856.7	1829.7	1829.7	1831.0
35°	5267.8	3997.8	2491.1	2127.0	1985.4	1896.7	1829.7	1804.0	1801.4	1786.0	1782.1
37.5°	5490.4	4030.0	2376.6	2024.0	1894.1	1810.5	1789.9	1758.9	1733.2	1699.8	1694.6
40°	5724.6	4062.2	2238.9	1917.2	1797.5	1751.2	1742.2	1701.1	1627.7	1545.4	1533.8
42.5°	6009.0	4084.0	2096.0	1810.5	1695.9	1680.5	1693.3	1622.6	1505.4	1443.7	1444.9
45°	6338.4	4120.1	1964.8	1704.9	1591.6	1591.6	1645.7	1553.1	1456.5	1418.0	1424.4
47.5°	6765.5	4203.7	1842.5	1589.1	1495.2	1520.9	1540.2	1469.4	1415.4	1367.8	1366.5
50°	7383.2	4404.4	1716.5	1472.0	1421.8	1473.3	1446.3	1405.1	1342.0	1303.5	1299.6
52.5°	8150.1	4522.8	1604.5	1366.5	1358.7	1410.2	1371.7	1333.0	1285.5	1234.0	1223.6
55°	8672.5	4544.6	1510.6	1289.2	1316.3	1311.2	1297.0	1262.3	1236.6	1168.3	1169.6
57.5°	9256.7	4588.4	1433.4	1243.0	1289.2	1232.7	1227.5	1197.9	1164.5	1118.2	1102.7
60°	9955.3	4656.7	1366.5	1225.0	1266.1	1181.2	1155.5	1143.9	1110.5	1087.3	1093.7
62.5°	10717.1	4718.4	1298.3	1227.5	1239.1	1131.0	1092.4	1088.6	1067.9	1060.3	1060.3
65°	11236.9	4549.9	1213.4	1225.0	1196.7	1079.5	1030.6	1029.4	1012.6	1010.0	1008.8
67.5°	11055.4	4015.8	1098.9	1188.9	1152.9	1028.1	974.1	968.9	947.0	948.3	948.3
70°	10147.1	3254.1	940.5	1100.1	1098.9	981.7	914.8	898.1	868.6	873.7	878.8
72.5°	8443.4	2411.3	728.3	952.1	1012.6	939.3	846.6	819.6	782.3	787.5	786.2
75°	6097.7	1639.3	530.1	724.5	881.4	889.1	779.7	733.4	688.4	696.1	698.6
77.5°	3120.3	929.1	389.9	499.3	692.3	808.0	719.2	657.5	647.2	719.2	709.0
80°	1017.8	465.8	270.2	350.0	454.2	661.3	630.5	559.8	557.2	573.9	492.8
82.5°	303.7	196.9	173.7	230.3	250.9	507.0	544.3	423.3	364.2	383.5	396.3
85°	104.2	95.2	99.1	114.5	119.6	297.2	380.9	280.5	265.1	292.1	288.2
87.5°	24.5	33.4	28.3	25.7	25.7	72.1	148.0	117.1	162.2	108.0	104.2
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)