

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: P197133

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197133
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13209 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 191
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

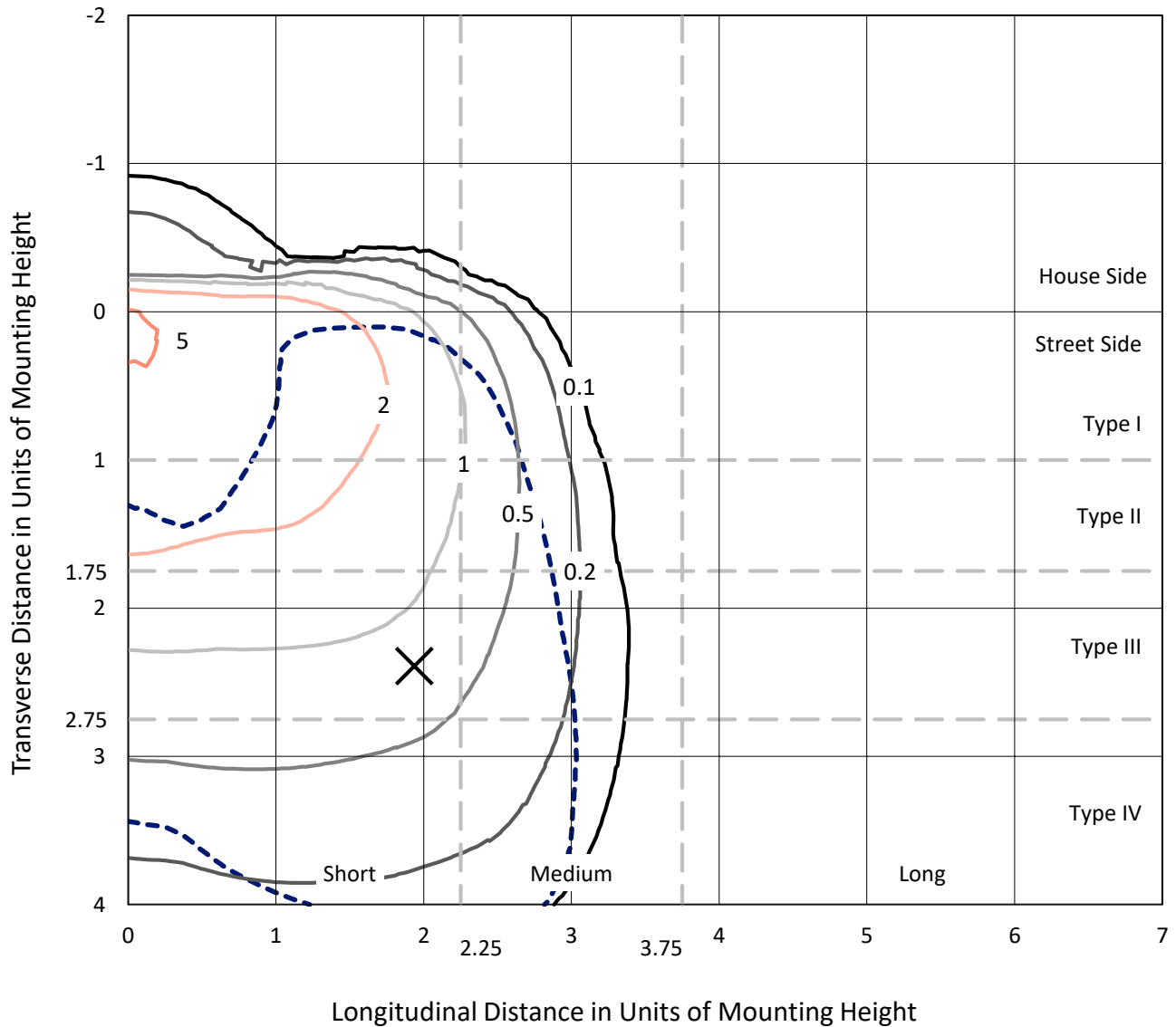


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

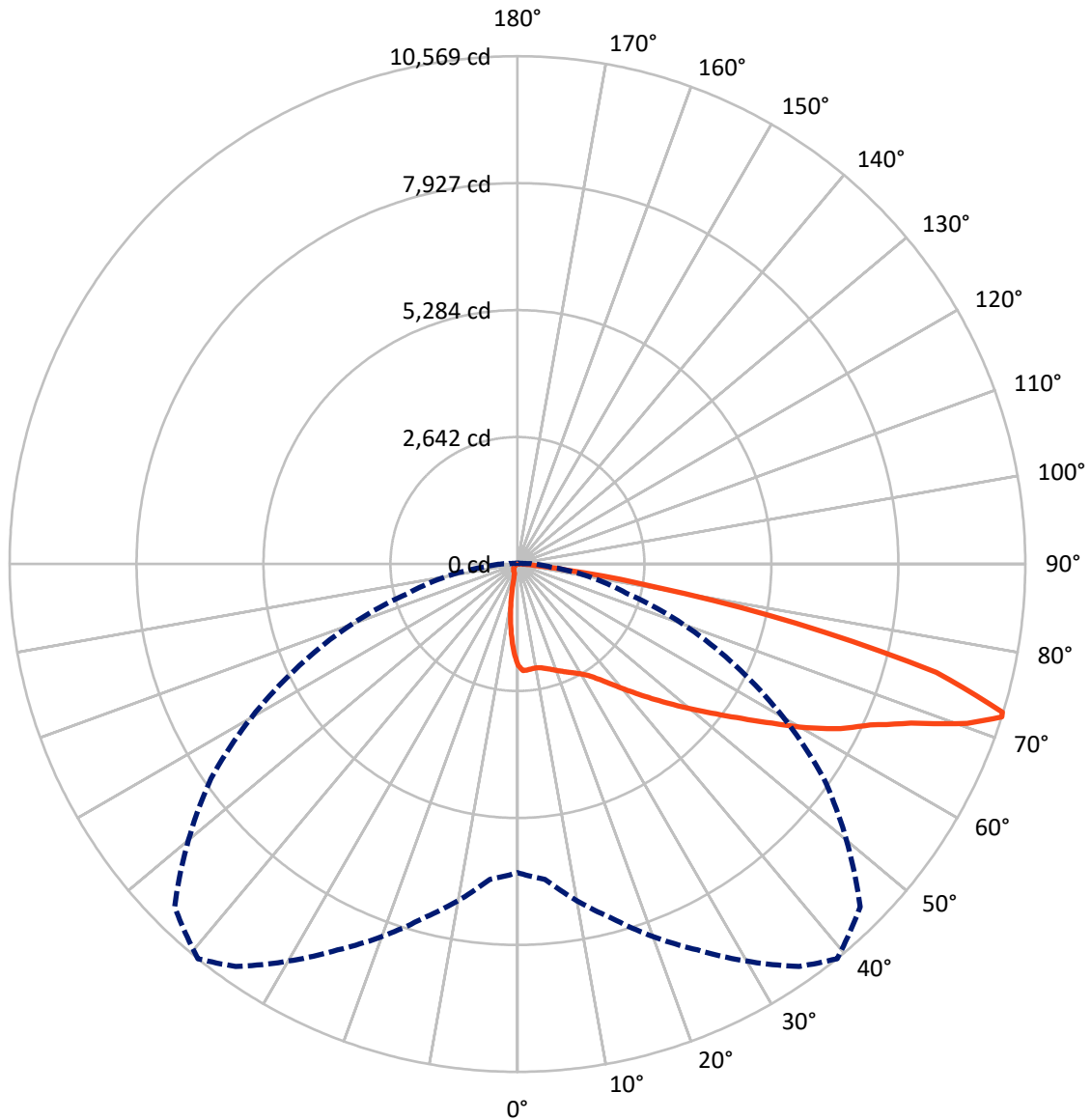


Based on 20 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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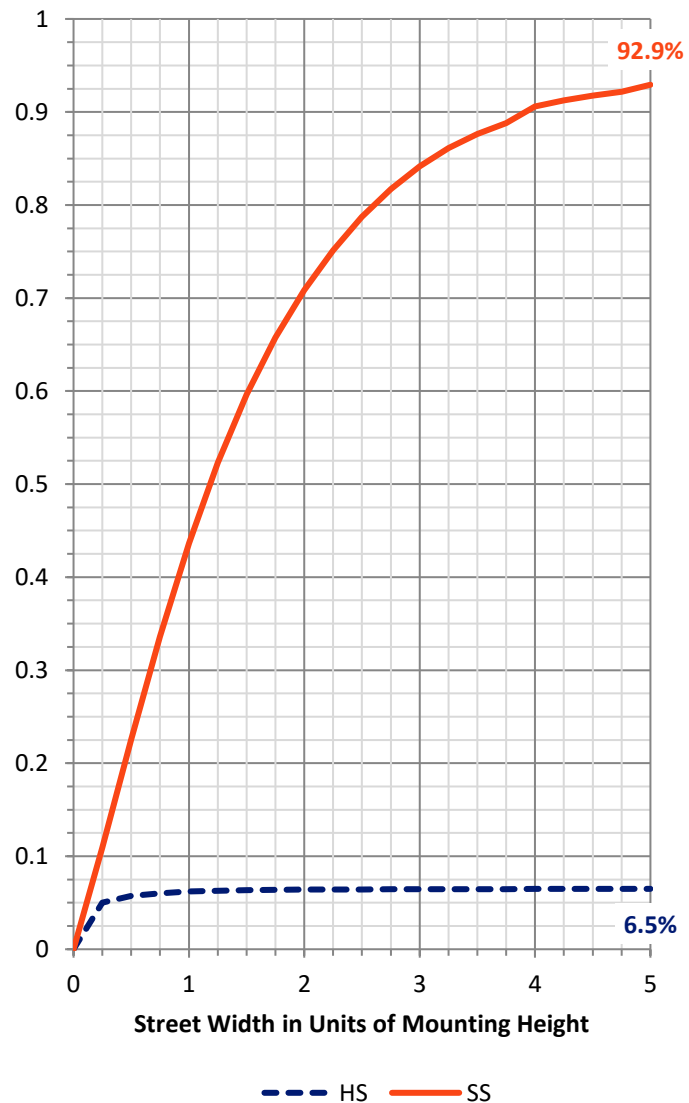
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	865.7	0.0	865.7
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	12343.3	0.0	12343.3
	% Fixture	93.4	0.0	93.4
Total	Lumens	13209.0	0.0	13209.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.0	1.3
10°-20°	416.3	3.2
20°-30°	691.4	5.2
30°-40°	1102.0	8.3
40°-50°	1819.0	13.8
50°-60°	2747.0	20.8
60°-70°	3578.4	27.1
70°-80°	2418.0	18.3
80°-90°	264.8	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°	13209.0	100.0
0°-180°	13209.0	100.0



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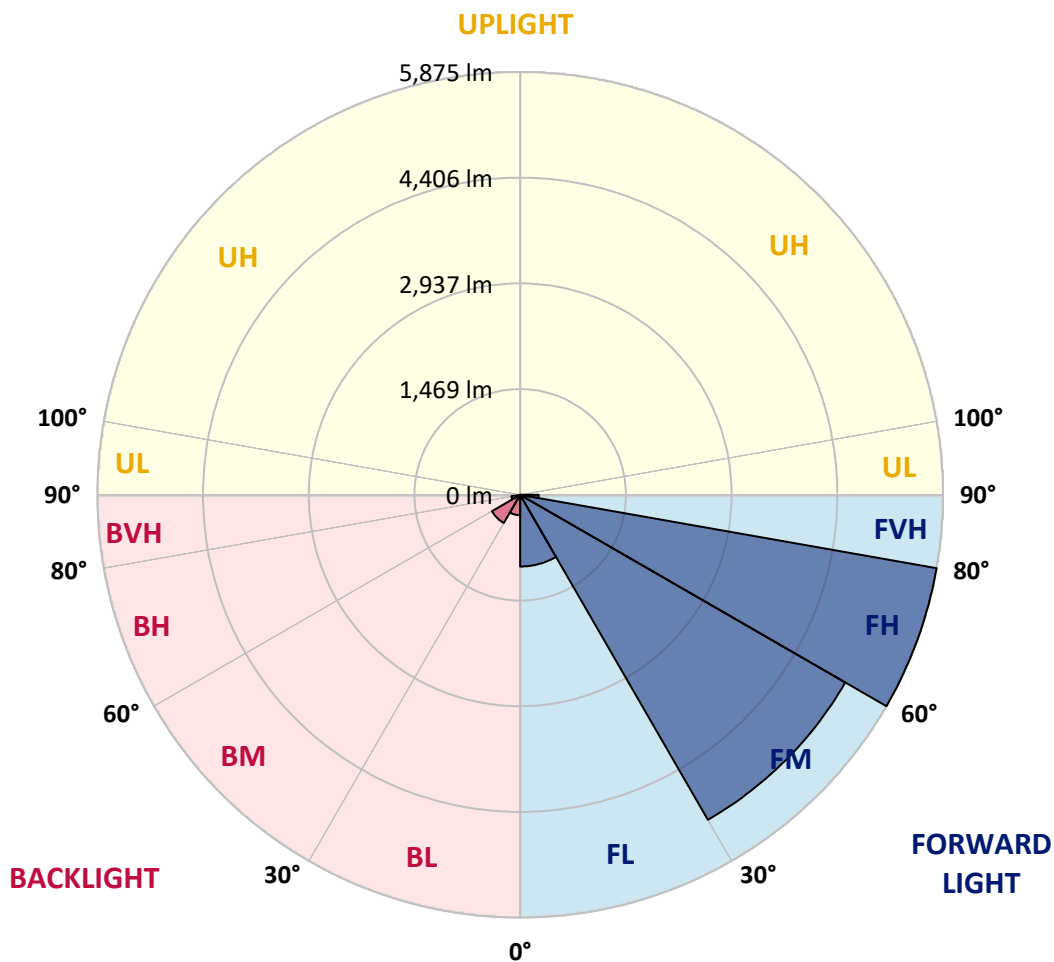
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	996.3	7.5			
FM	(30°-60°)	5215.1	39.5			
FH	(60°-80°)	5874.8	44.5			G3/7500
FVH	(80°-90°)	257.2	1.9			G3/500
BL	(0°-30°)	283.5	2.1	B1/500		
BM	(30°-60°)	452.9	3.4	B1/1000		
BH	(60°-80°)	121.7	0.9	B1/500		G1/500
BVH	(80°-90°)	7.6	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2
2.5°	2251.3	2255.4	2250.2	2240.9	2227.4	2219.1	2207.6	2182.7	2151.6	2124.6	2093.4
5°	2268.9	2271.0	2264.8	2247.1	2226.3	2214.9	2200.4	2173.4	2141.2	2103.8	2047.7
7.5°	2274.1	2273.1	2265.8	2244.0	2211.8	2197.3	2172.3	2139.1	2105.9	2071.6	2008.3
10°	2272.0	2272.0	2266.8	2246.1	2209.7	2196.2	2168.2	2132.9	2091.3	2057.1	1989.6
12.5°	2264.8	2268.9	2265.8	2254.4	2227.4	2217.0	2192.1	2156.8	2117.3	2082.0	2010.3
15°	2274.1	2280.3	2286.6	2282.4	2266.8	2257.5	2234.6	2198.3	2166.1	2128.7	2051.9
17.5°	2311.5	2325.0	2339.5	2340.6	2323.9	2307.3	2281.4	2244.0	2212.8	2178.6	2095.5
20°	2382.1	2392.5	2419.5	2424.7	2391.4	2367.6	2331.2	2287.6	2256.4	2227.4	2136.0
22.5°	2487.0	2498.4	2520.2	2512.9	2456.9	2428.8	2383.1	2333.3	2301.1	2284.5	2182.7
25°	2645.8	2649.0	2654.2	2622.0	2529.5	2498.4	2442.3	2386.2	2360.3	2358.2	2249.2
27.5°	2832.8	2836.9	2814.1	2742.4	2610.5	2570.0	2506.7	2455.8	2443.4	2458.9	2333.3
30°	3046.7	3047.7	2984.4	2868.1	2704.0	2659.3	2593.9	2537.9	2549.3	2587.7	2441.3
32.5°	3265.8	3255.4	3168.2	3016.6	2831.7	2777.7	2721.7	2665.6	2698.8	2776.7	2599.1
35°	3466.2	3462.0	3359.2	3182.7	2997.9	2950.1	2909.6	2850.4	2904.4	3031.1	2814.1
37.5°	3666.6	3663.5	3546.1	3362.3	3202.4	3168.2	3138.0	3092.4	3180.6	3366.5	3101.7
40°	3887.8	3882.6	3738.2	3561.7	3440.2	3421.5	3403.9	3384.2	3534.7	3793.3	3460.0
42.5°	4160.9	4138.0	3941.8	3778.7	3701.9	3707.1	3708.1	3727.9	3963.6	4301.1	3882.6
45°	4474.5	4423.6	4146.3	4011.3	3989.5	4020.7	4051.8	4133.9	4463.1	4885.7	4349.9
47.5°	4778.7	4696.7	4382.1	4261.6	4306.3	4370.6	4445.4	4605.3	5023.8	5497.3	4773.5
50°	5040.4	4956.3	4615.7	4516.0	4658.3	4753.8	4886.7	5128.7	5615.7	6014.4	5040.4
52.5°	5246.0	5179.5	4862.8	4796.4	5048.7	5179.5	5388.3	5706.0	6174.3	6355.0	5227.3
55°	5397.6	5364.4	5099.6	5108.9	5482.8	5671.8	5931.4	6290.6	6645.8	6619.8	5367.5
57.5°	5568.9	5543.0	5347.8	5477.6	6005.1	6249.1	6549.2	6837.9	6988.4	6832.7	5504.6
60°	5744.4	5752.7	5648.9	5924.1	6651.0	6920.9	7182.6	7254.3	7282.3	7048.7	5648.9
62.5°	5877.4	5912.7	5922.0	6405.9	7313.5	7544.0	7657.2	7606.3	7600.1	7338.4	5637.5
65°	6030.0	6122.4	6276.1	6934.4	7915.7	8067.3	8148.3	8222.1	8066.3	7424.6	5083.0
67.5°	6293.8	6439.1	6784.9	7582.4	8611.5	8835.8	9065.2	8987.4	8135.9	6549.2	3872.2
70°	6648.9	6826.5	7437.0	8428.7	9555.4	9931.3	10123.4	8926.1	6907.4	4525.4	2042.5
72°	6424.6	6585.5	7638.5	8860.7	10224.1	10568.9	10088.1	7785.9	5007.2	2345.7	684.3
72.5°	6206.5	6372.7	7574.1	8855.5	10290.6	10554.3	9858.6	7336.3	4430.9	1825.5	471.4
75°	4306.3	4516.0	6493.1	7960.4	9292.7	9002.9	7543.0	4442.3	1605.4	313.6	155.8
77.5°	2226.3	2388.3	3938.7	5625.0	6476.5	5931.4	4457.9	1927.3	444.4	166.1	102.8
80°	1380.0	1460.0	1842.1	2771.5	3364.4	2942.8	1966.7	778.8	284.5	98.6	82.0
82.5°	714.4	775.7	1159.9	1118.4	1243.0	1033.2	725.8	652.1	175.5	61.3	84.1
85°	234.7	249.2	712.3	743.5	531.7	357.2	321.9	622.0	50.9	39.5	71.6
87.5°	31.2	36.3	250.3	425.7	261.7	162.0	193.1	219.1	17.7	21.8	19.7
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°	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2	2114.2
2.5°	2072.6	2059.2	2016.6	1974.0	1925.2	1880.5	1845.2	1822.4	1832.8	1798.5	1803.7
5°	2013.5	1979.2	1885.7	1785.0	1676.0	1574.2	1493.2	1433.0	1421.6	1369.7	1371.7
7.5°	1956.3	1900.3	1748.7	1582.5	1401.8	1255.4	1122.5	1006.2	964.7	922.1	897.2
10°	1925.2	1848.4	1633.4	1391.5	1137.0	922.1	735.2	588.8	527.5	482.9	461.1
12.5°	1934.5	1832.8	1547.2	1218.0	883.7	610.6	415.4	308.4	271.0	250.3	243.0
15°	1965.7	1835.9	1469.3	1048.8	642.8	369.7	244.0	208.7	205.6	204.6	203.5
17.5°	1994.8	1839.0	1387.3	872.3	429.9	235.7	196.3	193.1	193.1	193.1	193.1
20°	2024.9	1840.0	1297.0	687.4	282.4	193.1	184.8	182.8	184.8	184.8	184.8
22.5°	2060.2	1847.3	1209.7	507.8	208.7	181.7	176.5	175.5	176.5	176.5	175.5
25°	2103.8	1862.9	1115.2	363.4	189.0	174.5	169.3	168.2	169.3	168.2	168.2
27.5°	2162.0	1883.7	1005.2	260.6	180.7	167.2	162.0	162.0	162.0	161.0	161.0
30°	2236.7	1908.6	857.7	205.6	172.4	159.9	155.8	155.8	154.7	153.7	153.7
32.5°	2343.7	1949.1	696.8	185.9	163.0	150.6	146.4	147.5	146.4	145.4	144.3
35°	2495.3	2012.4	537.9	175.5	153.7	141.2	137.1	137.1	137.1	135.0	135.0
37.5°	2710.2	2109.0	402.9	165.1	144.3	131.9	126.7	126.7	125.6	123.6	124.6
40°	2976.1	2230.5	291.8	155.8	135.0	121.5	117.3	115.3	113.2	111.1	111.1
42.5°	3295.9	2348.9	219.1	146.4	125.6	113.2	108.0	105.9	101.8	99.7	98.6
45°	3654.1	2474.5	181.7	135.0	115.3	103.8	99.7	95.5	90.3	87.2	86.2
47.5°	3956.3	2551.4	162.0	123.6	104.9	94.5	90.3	84.1	77.9	75.8	75.8
50°	4138.0	2519.2	145.4	112.1	94.5	85.1	80.0	71.6	67.5	65.4	64.4
52.5°	4239.8	2423.6	131.9	102.8	85.1	74.8	67.5	60.2	58.2	56.1	56.1
55°	4309.4	2285.5	117.3	93.5	76.8	65.4	57.1	51.9	49.8	48.8	47.8
57.5°	4375.8	2117.3	103.8	85.1	68.5	58.2	48.8	46.7	42.6	41.5	41.5
60°	4395.6	1885.7	91.4	75.8	61.3	50.9	42.6	39.5	35.3	34.3	34.3
62.5°	4144.3	1500.5	81.0	64.4	54.0	43.6	37.4	33.2	29.1	29.1	29.1
65°	3463.1	1018.7	69.6	56.1	47.8	37.4	32.2	27.0	24.9	24.9	24.9
67.5°	2412.2	568.0	59.2	47.8	40.5	31.2	27.0	22.8	21.8	22.8	22.8
70°	1087.2	225.3	49.8	39.5	33.2	26.0	22.8	19.7	21.8	21.8	21.8
72°	326.1	120.5	41.5	32.2	27.0	22.8	19.7	18.7	20.8	21.8	21.8
72.5°	241.9	108.0	39.5	31.2	27.0	21.8	18.7	18.7	20.8	21.8	21.8
75°	124.6	73.7	30.1	22.8	19.7	17.7	15.6	17.7	20.8	20.8	20.8
77.5°	97.6	60.2	24.9	17.7	16.6	15.6	14.5	16.6	18.7	18.7	18.7
80°	91.4	39.5	19.7	16.6	14.5	13.5	13.5	14.5	16.6	17.7	17.7
82.5°	92.4	32.2	17.7	15.6	13.5	12.5	12.5	13.5	15.6	16.6	16.6
85°	59.2	21.8	15.6	13.5	12.5	11.4	11.4	12.5	14.5	15.6	15.6
87.5°	19.7	16.6	13.5	12.5	10.4	10.4	10.4	10.4	12.5	13.5	14.5
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)