

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: P966316

Luminaire Tested: **NAV-SB4B-830-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966316
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20745 lumens
Efficiency: N/A
Efficacy: 141.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

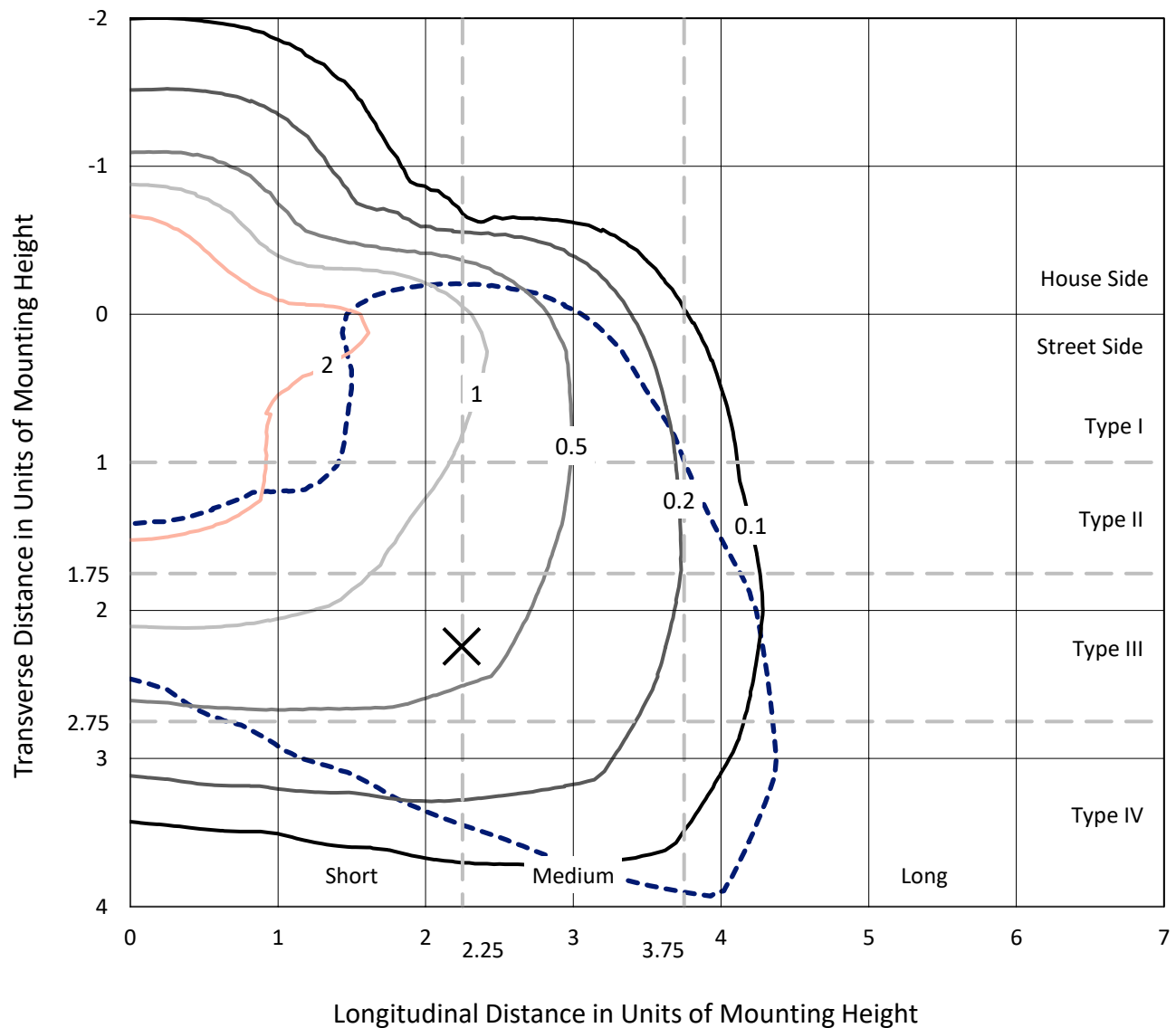
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

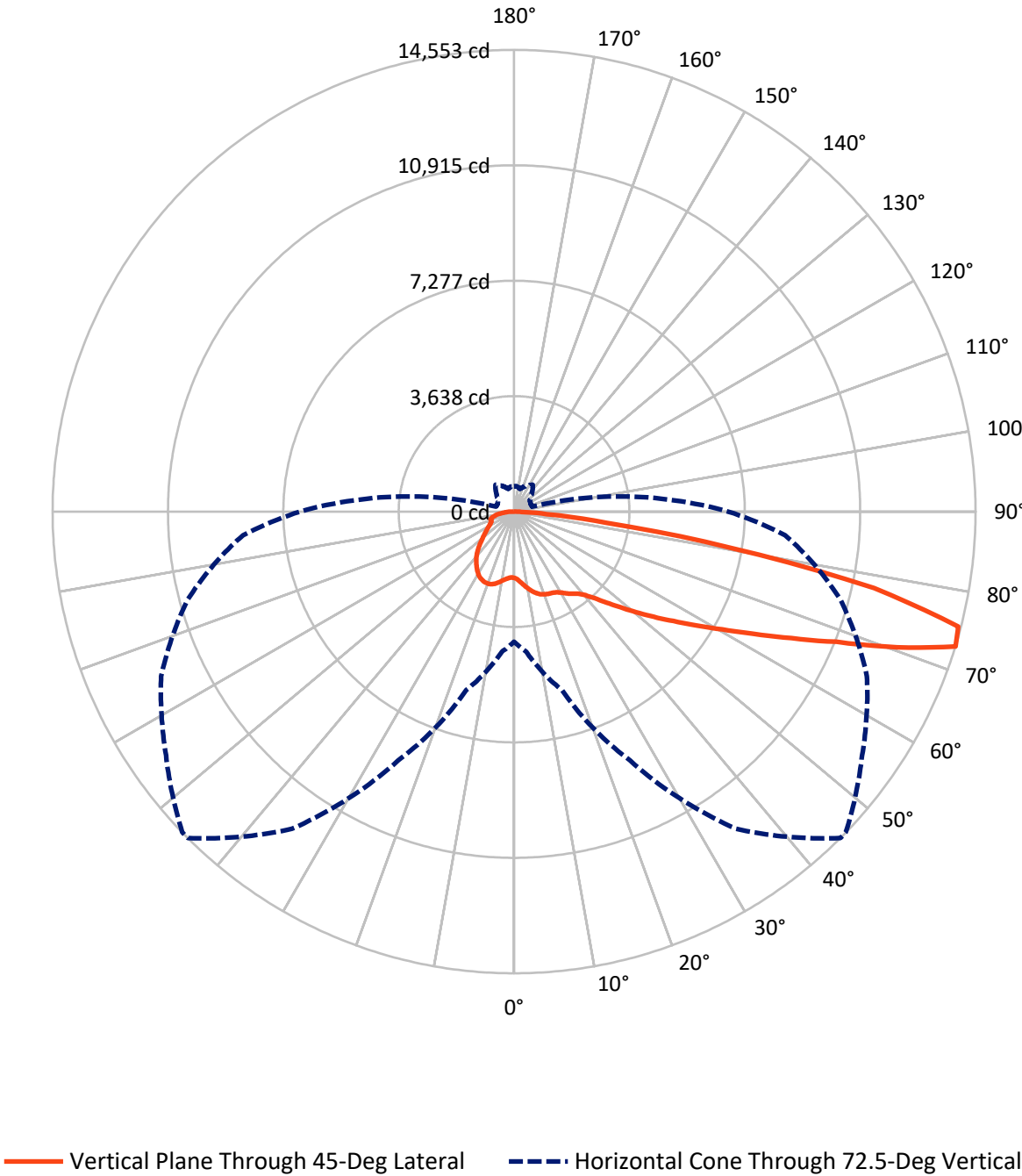
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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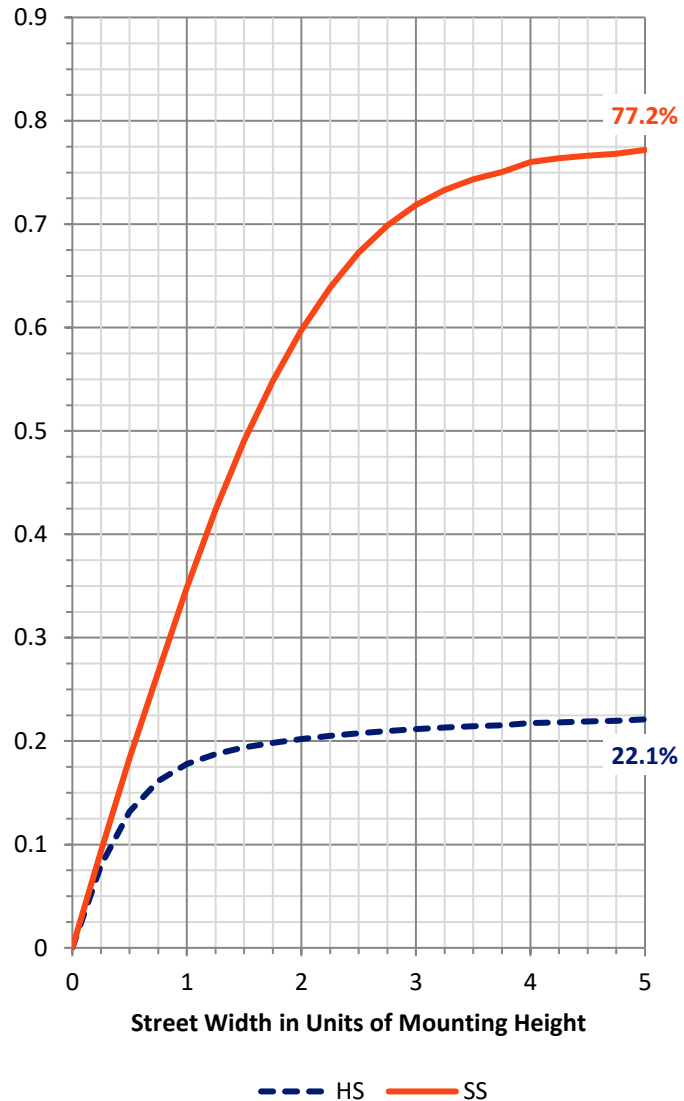
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4689.7	0.0	4689.7
	% Fixture	22.6	0.0	22.6
Street Side	Lumens	16055.3	0.0	16055.3
	% Fixture	77.4	0.0	77.4
Total	Lumens	20745.0	0.0	20745.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.0	1.0
10°-20°	710.2	3.4
20°-30°	1235.4	6.0
30°-40°	1771.0	8.5
40°-50°	2493.7	12.0
50°-60°	3819.6	18.4
60°-70°	5533.2	26.7
70°-80°	4418.6	21.3
80°-90°	550.3	2.7
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°	20745.0	100.0
0°-180°	20745.0	100.0

Coefficient of Utilization



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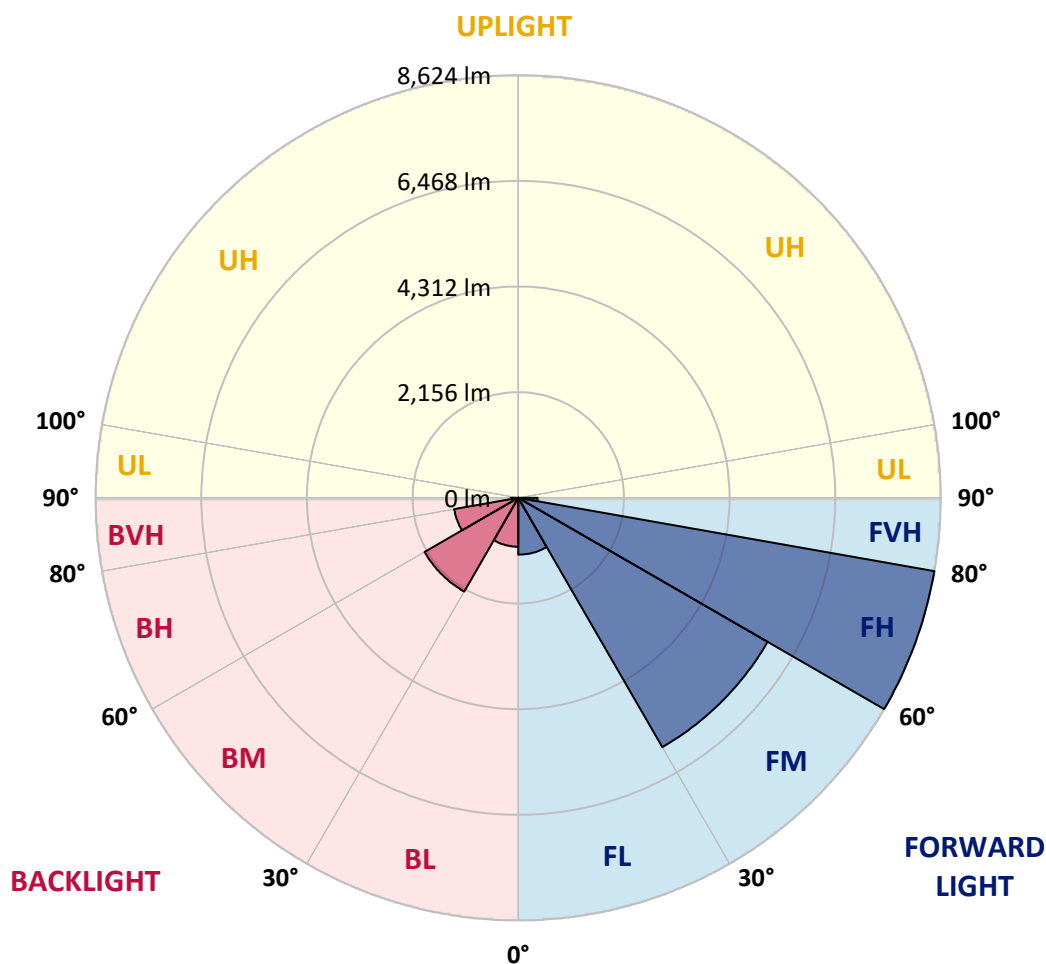
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1160.1	5.6			
FM	(30°-60°)	5876.1	28.3			
FH	(60°-80°)	8624.3	41.6			G4/12000
FVH	(80°-90°)	394.8	1.9			G3/500
BL	(0°-30°)	998.5	4.8	B2/1000		
BM	(30°-60°)	2208.2	10.6	B2/2500		
BH	(60°-80°)	1327.5	6.4	B3/2500		G3/2500
BVH	(80°-90°)	155.5	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7
2.5°	2174.7	2188.9	2175.9	2163.8	2158.3	2144.1	2143.1	2134.3	2128.8	2113.5	2109.1
5°	2326.6	2345.2	2323.4	2299.3	2277.4	2242.5	2238.1	2213.0	2184.6	2151.8	2133.2
7.5°	2498.2	2514.6	2489.4	2453.4	2415.1	2357.2	2356.2	2310.2	2265.5	2209.7	2178.0
10°	2647.9	2669.8	2635.9	2586.7	2538.6	2473.0	2465.4	2413.0	2356.2	2284.0	2235.9
12.5°	2780.1	2795.5	2762.7	2702.5	2646.9	2581.3	2571.4	2513.5	2450.2	2368.2	2307.0
15°	2885.1	2904.7	2861.0	2796.5	2737.6	2673.1	2664.3	2611.9	2548.5	2462.2	2383.4
17.5°	2953.9	2970.3	2925.5	2853.4	2796.5	2743.0	2736.4	2692.8	2637.0	2549.6	2465.4
20°	2980.2	2997.6	2950.7	2877.4	2825.0	2783.4	2780.1	2748.4	2710.2	2630.5	2545.2
22.5°	3006.3	3022.7	2961.5	2885.1	2839.1	2812.9	2811.9	2791.1	2775.8	2710.2	2627.2
25°	3112.4	3116.7	3034.8	2924.4	2858.8	2835.9	2834.8	2833.7	2840.3	2788.9	2715.6
27.5°	3204.1	3203.1	3133.1	3029.3	2927.7	2879.6	2878.5	2889.5	2910.2	2867.5	2807.5
30°	3338.6	3326.5	3243.5	3135.4	3042.4	2968.1	2961.5	2951.7	2968.1	2934.3	2899.3
32.5°	3623.8	3585.6	3451.2	3258.8	3137.5	3080.6	3071.9	3010.7	3017.3	2996.5	2979.1
35°	4032.6	3982.2	3803.1	3492.7	3255.5	3174.6	3170.3	3092.7	3079.6	3061.1	3067.5
37.5°	4518.8	4456.6	4247.8	3831.4	3458.8	3283.9	3277.4	3207.4	3153.9	3134.2	3171.4
40°	5007.3	4928.6	4756.0	4244.5	3758.3	3466.4	3445.6	3339.7	3278.5	3245.7	3324.4
42.5°	5481.6	5416.1	5268.5	4707.9	4127.6	3733.0	3687.2	3505.8	3459.9	3429.3	3571.4
45°	5901.2	5842.3	5734.1	5202.9	4560.3	4095.9	4051.1	3755.0	3740.7	3740.7	3946.2
47.5°	6242.2	6229.1	6114.3	5707.8	5070.7	4509.0	4431.4	4101.3	4139.7	4198.6	4478.4
50°	6620.4	6584.3	6461.9	6205.0	5670.7	4982.2	4918.8	4526.5	4669.7	4831.4	5247.8
52.5°	6967.8	6987.5	6850.9	6723.1	6348.2	5510.0	5398.6	5028.1	5337.4	5605.1	6149.4
55°	7325.3	7326.3	7288.1	7270.5	7058.6	6093.6	5971.2	5631.3	6123.1	6455.3	7200.6
57.5°	7660.7	7662.9	7719.7	7873.8	7882.6	6766.7	6628.0	6372.3	6996.2	7335.1	8284.8
60°	7960.2	7975.4	8130.6	8491.3	8607.1	7538.4	7407.2	7247.7	7899.0	8239.9	9424.6
62.5°	8060.7	8116.5	8461.8	8974.3	9322.9	8484.7	8355.8	8260.7	8847.5	9164.4	10377.5
65°	7890.2	8018.1	8685.7	9373.2	10059.5	9609.3	9481.4	9377.5	9833.2	10131.6	11160.0
67.5°	7471.6	7636.7	8672.6	9791.7	10953.5	10962.2	10843.1	10599.3	10890.0	11004.8	11414.6
70°	6369.0	6616.0	7908.8	9948.0	11979.6	12812.3	12697.6	12070.3	11944.6	11389.5	10697.7
72.5°	4103.6	4435.8	5823.6	8661.8	12208.0	14553.2	14546.6	13398.1	12278.0	10642.0	8579.8
75°	1497.2	1700.5	2705.8	5436.8	10247.4	14464.7	14507.2	13170.7	11208.1	8220.3	5345.1
77.5°	545.3	596.7	883.0	2089.5	6302.3	11605.9	11694.3	10529.4	7977.7	4125.4	2117.9
80°	286.3	314.8	452.4	810.9	2700.4	6892.5	7031.3	6257.5	3749.4	1242.5	634.9
82.5°	158.5	171.6	253.6	440.4	1216.4	2947.4	3030.4	2472.0	1319.1	526.7	262.3
85°	85.3	90.7	119.1	240.5	594.5	1021.8	1044.8	738.7	525.6	309.2	126.8
87.5°	25.1	30.6	39.4	76.5	232.8	229.5	234.9	146.5	207.7	156.3	41.5
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°	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7	2092.7
2.5°	2102.6	2099.3	2087.3	2081.9	2075.3	2074.2	2079.6	2080.8	2081.9	2082.9	2087.3
5°	2122.3	2111.3	2100.4	2093.9	2096.0	2097.1	2108.0	2115.7	2121.1	2125.5	2127.7
7.5°	2160.5	2151.8	2133.2	2132.1	2135.4	2145.2	2159.5	2176.9	2186.7	2194.4	2196.6
10°	2217.4	2201.0	2179.0	2182.3	2188.9	2203.1	2232.7	2246.9	2263.2	2277.4	2274.2
12.5°	2275.3	2261.0	2235.9	2238.1	2249.1	2274.2	2302.6	2320.1	2331.0	2341.9	2346.3
15°	2350.6	2325.5	2298.3	2298.3	2317.9	2345.2	2358.3	2372.6	2379.1	2391.1	2395.5
17.5°	2428.2	2395.5	2359.4	2357.2	2381.3	2394.4	2402.0	2404.2	2406.4	2419.5	2423.9
20°	2505.8	2469.8	2418.4	2414.1	2419.5	2417.4	2416.2	2414.1	2417.4	2433.8	2440.3
22.5°	2582.4	2540.9	2469.8	2450.2	2434.8	2414.1	2413.0	2411.8	2414.1	2430.5	2441.3
25°	2672.0	2621.6	2526.6	2467.6	2416.2	2387.8	2391.1	2392.2	2394.4	2407.5	2424.9
27.5°	2769.2	2713.5	2579.1	2462.2	2369.3	2349.6	2344.1	2347.4	2355.0	2375.8	2396.6
30°	2866.5	2800.9	2627.2	2440.3	2310.2	2282.9	2265.5	2273.0	2297.1	2317.9	2340.8
32.5°	2955.0	2889.5	2665.4	2392.2	2234.8	2192.2	2169.3	2179.0	2203.1	2210.8	2238.1
35°	3058.8	2984.5	2681.8	2315.7	2152.9	2087.3	2056.7	2042.5	2054.5	2046.8	2070.9
37.5°	3174.6	3097.0	2679.7	2215.1	2056.7	1981.3	1938.7	1885.1	1860.0	1833.7	1850.1
40°	3346.2	3234.8	2653.4	2093.9	1937.6	1868.8	1792.2	1701.5	1644.7	1593.4	1596.6
42.5°	3580.1	3426.1	2605.3	1960.5	1803.2	1738.7	1634.9	1528.9	1439.2	1354.0	1346.3
45°	3928.7	3676.3	2545.2	1818.5	1657.8	1594.4	1481.8	1362.7	1261.2	1151.8	1138.8
47.5°	4431.4	4012.9	2488.4	1656.7	1504.8	1446.9	1345.3	1234.9	1114.7	1008.7	996.6
50°	5122.1	4495.9	2435.9	1499.4	1354.0	1310.3	1229.4	1116.8	995.6	910.3	904.9
52.5°	6000.8	5152.7	2414.1	1347.5	1213.1	1196.7	1132.2	1027.3	912.6	840.4	835.0
55°	7009.4	5938.4	2414.1	1202.1	1089.6	1095.0	1050.2	952.9	853.5	789.0	782.5
57.5°	8038.9	6734.0	2370.3	1067.7	984.6	1007.6	979.2	893.9	804.3	737.7	726.7
60°	8987.4	7400.6	2193.3	945.3	891.7	927.8	909.3	836.0	726.7	671.0	662.3
62.5°	9716.3	7776.6	1852.4	848.1	815.3	856.8	847.0	759.5	712.5	689.6	681.9
65°	10081.3	7715.4	1416.3	761.7	750.8	815.3	794.5	791.2	754.1	727.9	719.0
67.5°	9857.3	7188.6	1027.3	698.3	713.6	776.9	856.8	869.9	801.0	749.7	741.0
70°	8874.9	6235.7	765.0	638.2	666.7	778.1	977.0	910.3	785.8	725.6	715.8
72.5°	6751.5	4650.0	593.4	574.8	605.5	783.5	1030.5	891.7	742.0	802.2	795.6
75°	3861.0	2552.9	476.5	497.2	528.9	732.2	1003.2	843.7	708.2	736.6	736.6
77.5°	1472.0	981.3	393.4	420.8	425.1	639.3	959.5	840.4	674.2	657.8	599.9
80°	510.3	383.6	325.6	334.4	328.9	568.3	920.1	731.1	551.9	493.9	477.5
82.5°	208.7	191.3	257.9	247.0	233.9	441.5	743.1	597.8	451.3	398.9	394.5
85°	90.7	121.3	170.5	149.8	135.5	306.0	595.6	505.9	381.4	328.9	327.9
87.5°	18.6	45.9	72.2	67.8	69.9	204.4	422.9	359.6	269.9	202.1	158.5
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)