

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: P966160

Luminaire Tested: **NAV-SB4B-735-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966160
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-735-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17818.6 lumens
Efficiency: N/A
Efficacy: 121.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

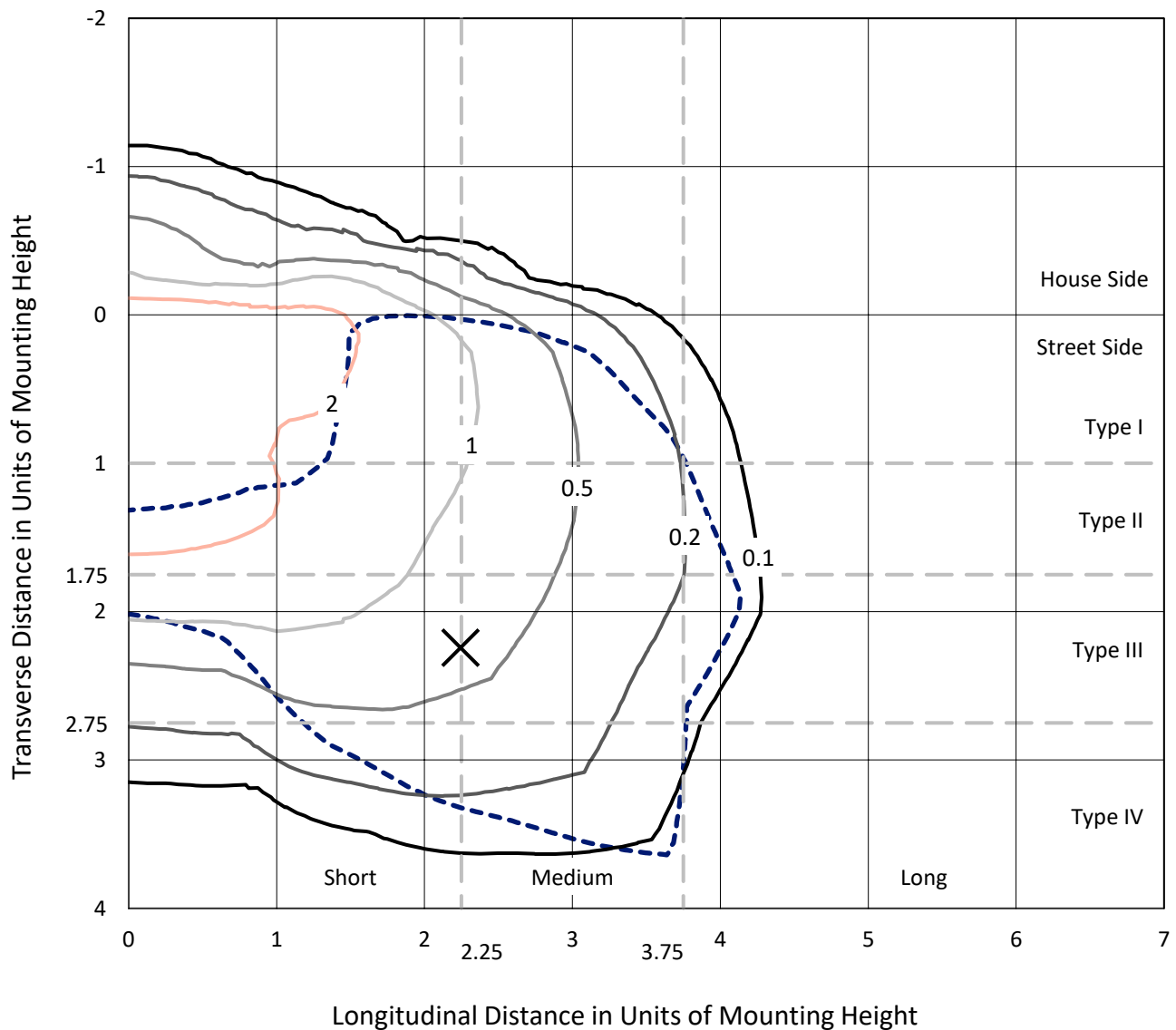
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

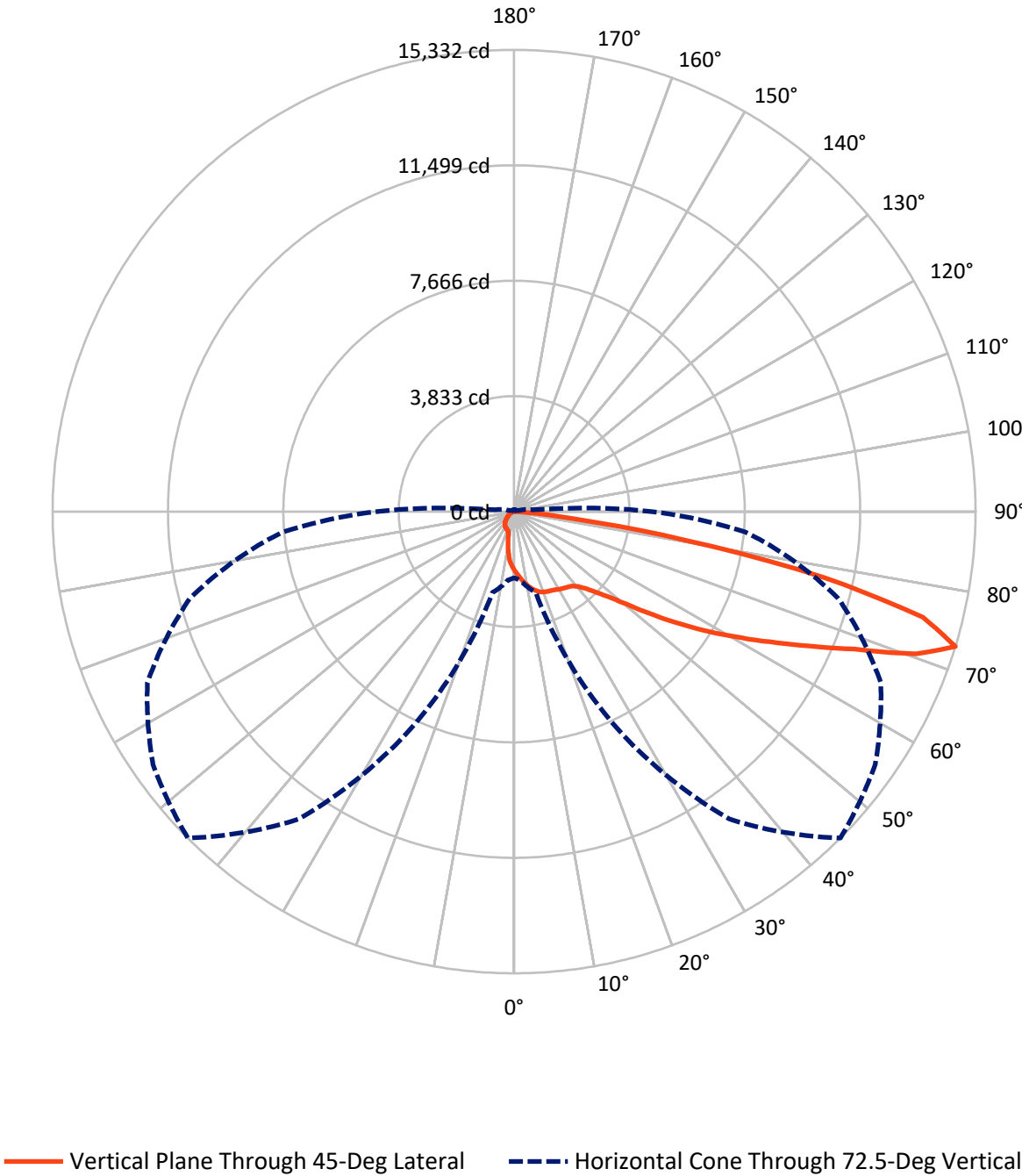
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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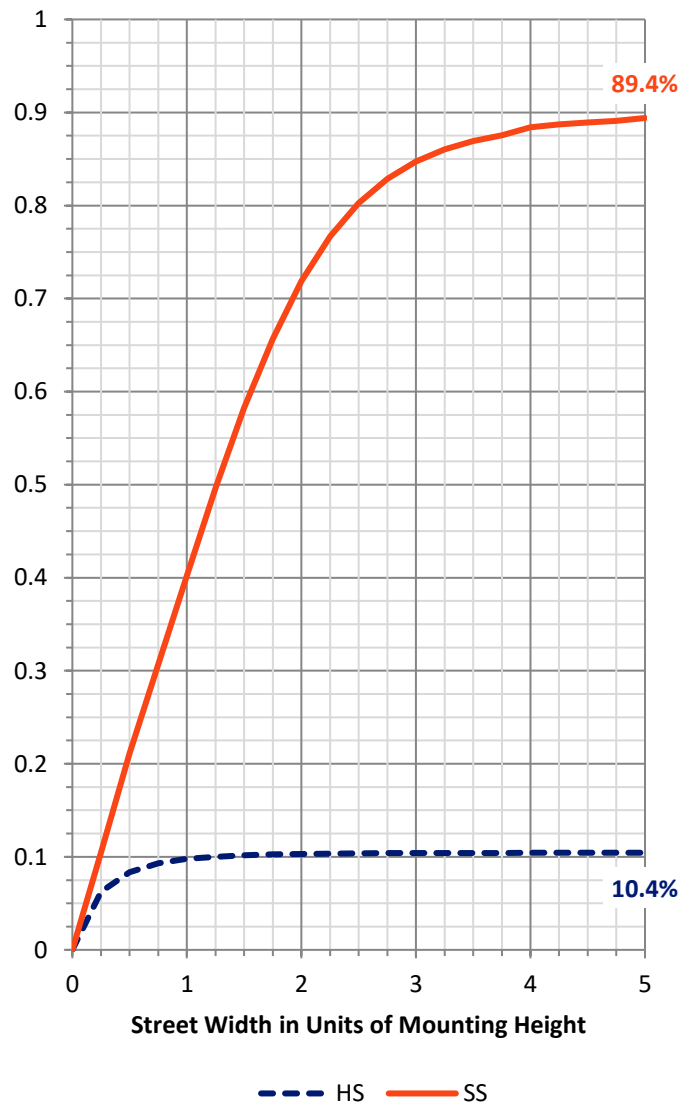
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1872.2	0.0	1872.2
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	15946.4	0.0	15946.4
	% Fixture	89.5	0.0	89.5
Total	Lumens	17818.6	0.0	17818.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.9	1.0
10°-20°	537.5	3.0
20°-30°	882.7	5.0
30°-40°	1251.9	7.0
40°-50°	2069.3	11.6
50°-60°	3717.2	20.9
60°-70°	5161.5	29.0
70°-80°	3744.0	21.0
80°-90°	270.7	1.5
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°	17818.6	100.0
0°-180°	17818.6	100.0

Coefficient of Utilization



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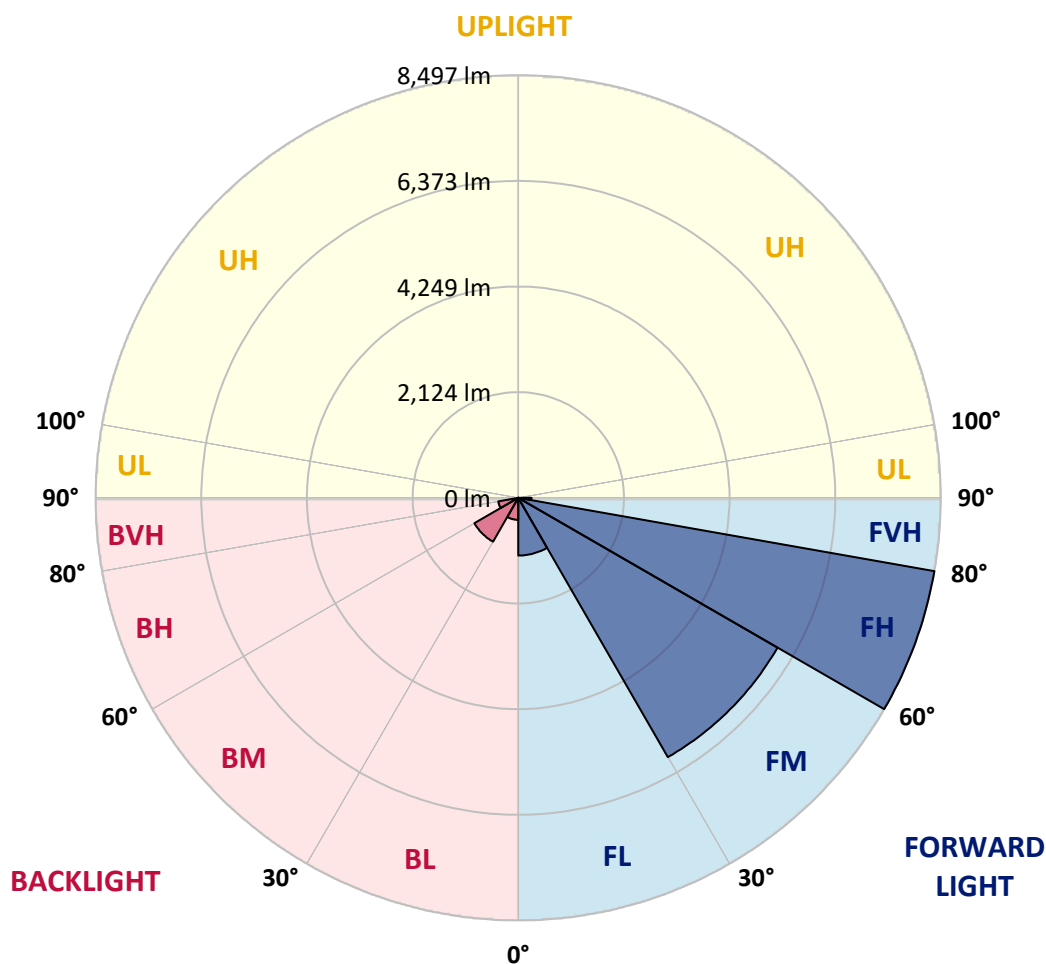
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1160.7	6.5			
FM	(30°-60°)	6020.1	33.8			
FH	(60°-80°)	8497.2	47.7			G4/12000
FVH	(80°-90°)	268.4	1.5			G3/500
BL	(0°-30°)	443.5	2.5	B1/500		
BM	(30°-60°)	1018.2	5.7	B2/2500		
BH	(60°-80°)	408.3	2.3	B1/500		G1/500
BVH	(80°-90°)	2.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1
2.5°	2132.1	2135.7	2133.3	2118.7	2094.4	2081.0	2073.7	2049.4	2033.6	2005.6	1976.4
5°	2327.9	2342.4	2333.9	2304.8	2258.6	2225.7	2215.9	2166.1	2121.1	2068.9	2008.0
7.5°	2535.8	2543.1	2527.3	2489.6	2427.6	2371.6	2363.1	2293.8	2222.1	2141.8	2059.1
10°	2715.8	2724.3	2700.1	2645.3	2574.8	2505.4	2493.3	2416.6	2331.6	2233.1	2127.2
12.5°	2866.7	2875.2	2843.6	2777.9	2700.1	2628.3	2616.1	2535.8	2442.2	2332.8	2201.4
15°	2981.0	2996.8	2954.3	2883.7	2799.8	2728.0	2722.0	2642.9	2551.6	2430.1	2290.2
17.5°	3047.9	3063.7	3023.5	2938.5	2866.7	2805.8	2798.6	2732.9	2647.8	2531.0	2376.6
20°	3058.8	3073.5	3030.8	2956.7	2897.1	2848.5	2844.8	2797.3	2735.3	2623.4	2470.1
22.5°	3026.0	3044.2	3005.3	2945.7	2904.3	2878.8	2874.0	2847.2	2812.0	2717.1	2557.8
25°	2992.0	3006.5	2977.3	2925.0	2903.2	2900.7	2904.3	2899.5	2892.2	2812.0	2659.9
27.5°	2989.5	3005.3	2972.5	2922.6	2910.5	2936.0	2939.7	2962.8	2968.8	2898.3	2758.5
30°	3010.2	3021.2	2989.5	2937.2	2931.1	2989.5	2990.7	3032.1	3041.8	2971.3	2855.8
32.5°	3055.2	3067.3	3035.7	2959.1	2950.6	3032.1	3035.7	3090.5	3106.3	3049.1	2957.9
35°	3161.0	3175.6	3139.2	3020.0	2989.5	3072.2	3083.2	3147.7	3179.2	3131.8	3063.7
37.5°	3424.9	3382.4	3332.5	3142.8	3078.3	3135.5	3153.7	3229.2	3285.0	3230.3	3190.2
40°	4080.5	3946.7	3791.1	3352.0	3234.0	3270.5	3285.0	3360.5	3437.1	3383.6	3364.2
42.5°	5064.4	4906.3	4655.8	3833.6	3468.7	3486.9	3497.9	3563.6	3671.9	3629.2	3634.1
45°	5941.3	5884.2	5628.8	4655.8	3907.8	3817.8	3831.1	3865.2	4024.6	4008.8	4040.3
47.5°	6615.1	6582.2	6385.2	5599.6	4649.7	4222.8	4260.5	4276.3	4506.2	4562.1	4647.2
50°	7133.3	7121.1	6944.7	6438.7	5619.0	4820.0	4833.4	4799.3	5143.4	5282.1	5443.9
52.5°	7622.2	7663.5	7533.4	7218.4	6654.1	5602.0	5599.6	5439.1	5903.6	6112.8	6388.9
55°	8063.7	8078.2	8091.7	8013.8	7695.2	6492.2	6469.2	6206.5	6785.4	7001.9	7301.1
57.5°	8478.4	8484.5	8603.6	8763.0	8778.8	7448.3	7405.7	7090.6	7748.7	7903.2	8086.7
60°	8756.9	8784.9	9036.7	9479.4	9672.7	8434.6	8411.6	8090.4	8729.0	8800.8	8766.6
62.5°	8355.6	8525.8	9160.7	10038.8	10516.8	9528.0	9517.1	9215.5	9760.4	9701.9	9410.0
65°	6763.5	7051.8	8168.2	10417.1	11345.1	10749.2	10765.0	10443.8	10819.7	10630.0	9933.1
67.5°	4731.2	5035.2	6356.0	10447.5	12270.7	12183.0	12274.3	11770.8	11944.7	11519.1	10057.1
70°	3271.7	3428.6	4288.5	9793.2	12991.9	14158.2	14155.9	13400.5	13063.6	11924.0	9424.7
72.5°	2200.2	2281.6	2785.2	7769.3	12461.6	15332.0	15261.4	14645.9	13440.6	11151.7	7700.0
75°	928.0	987.6	1289.2	4366.3	9858.9	14026.9	13836.0	12943.2	11942.3	8781.3	4804.2
77.5°	294.4	319.9	508.4	1562.8	5430.6	10543.6	10341.7	8083.2	8004.1	4405.2	1756.2
80°	139.9	163.0	285.8	627.6	2136.9	5734.6	5706.6	3666.9	3443.2	1189.5	352.7
82.5°	60.8	71.8	158.2	335.7	955.9	2045.7	2087.1	1247.8	1032.6	451.2	108.2
85°	19.5	25.5	73.0	154.5	403.7	508.4	502.4	296.7	415.9	245.7	37.7
87.5°	0.0	0.0	24.3	35.3	41.3	29.2	32.8	25.5	115.5	68.1	13.4
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°	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1	1952.1
2.5°	1961.7	1942.4	1908.2	1876.7	1848.7	1820.7	1803.7	1779.4	1776.9	1776.9	1783.0
5°	1975.2	1943.5	1882.7	1818.2	1744.0	1673.5	1603.0	1534.9	1513.0	1497.2	1504.5
7.5°	2014.1	1964.2	1868.2	1745.3	1604.2	1449.8	1341.5	1224.8	1179.8	1155.4	1159.1
10°	2070.1	2001.9	1856.0	1640.7	1412.0	1201.6	1047.1	920.7	872.1	851.4	851.4
12.5°	2132.1	2048.2	1834.1	1510.5	1201.6	949.9	799.1	740.7	733.4	733.4	733.4
15°	2206.2	2104.1	1796.4	1357.3	981.5	751.6	698.1	700.6	707.9	712.7	712.7
17.5°	2282.9	2163.7	1736.8	1185.8	786.9	676.2	677.4	681.1	687.2	692.1	692.1
20°	2365.6	2223.3	1657.7	1003.4	675.0	654.4	657.9	661.6	666.5	668.9	670.1
22.5°	2454.4	2279.2	1564.0	824.6	637.3	636.1	637.3	640.9	647.1	647.1	649.4
25°	2549.3	2341.3	1457.0	694.4	617.9	617.9	620.3	622.7	627.6	627.6	628.8
27.5°	2646.5	2398.4	1344.0	626.4	600.9	599.6	599.6	603.2	605.7	606.9	608.1
30°	2753.6	2465.3	1230.8	611.7	587.4	581.4	577.7	580.2	582.6	583.8	586.2
32.5°	2863.0	2529.8	1129.9	617.9	574.1	563.1	550.9	548.5	548.5	553.4	557.1
35°	2984.7	2600.3	1052.1	638.6	566.7	536.4	516.9	505.9	507.2	514.4	518.1
37.5°	3130.6	2685.5	994.9	656.8	561.9	505.9	474.4	460.9	452.4	460.9	458.5
40°	3321.5	2810.8	953.6	671.4	555.9	470.7	428.1	406.2	390.4	395.2	392.9
42.5°	3602.5	3007.8	937.7	672.6	542.4	429.4	380.7	351.5	328.4	329.6	324.7
45°	3996.6	3319.2	1019.3	656.8	513.2	384.4	330.8	291.9	277.3	273.7	268.8
47.5°	4536.5	3772.8	1207.8	623.9	470.7	340.5	282.2	249.3	238.4	232.3	228.7
50°	5260.2	4355.3	1417.0	587.4	428.1	299.2	242.0	221.4	214.0	208.0	206.7
52.5°	6099.5	4946.4	1588.4	550.9	385.5	262.7	216.5	204.3	198.2	193.4	192.2
55°	6869.3	5353.9	1578.7	512.0	344.2	233.5	198.2	191.0	183.7	178.8	176.4
57.5°	7348.5	5411.1	1301.3	469.4	296.7	210.4	181.2	176.4	167.8	161.7	160.5
60°	7568.7	5085.1	912.1	413.5	249.3	188.5	163.0	160.5	149.5	141.0	138.7
62.5°	7608.8	4479.5	608.1	344.2	208.0	167.8	144.7	141.0	126.5	111.9	104.6
65°	7445.8	3613.4	420.9	268.8	177.5	146.0	124.0	116.7	101.0	86.3	81.5
67.5°	6930.1	2537.1	293.2	193.4	150.8	115.5	98.5	96.0	83.9	71.8	68.1
70°	5985.1	1446.1	195.8	144.7	119.2	79.0	77.8	80.3	68.1	58.4	53.5
72.5°	4588.9	661.6	121.7	105.8	81.5	53.5	62.0	63.2	52.3	43.8	38.9
75°	2701.3	283.4	76.7	68.1	41.3	35.3	45.0	46.2	35.3	28.0	24.3
77.5°	919.5	107.0	48.7	40.2	20.7	19.5	29.2	29.2	19.5	11.0	8.5
80°	209.2	40.2	24.3	15.8	9.7	8.5	9.7	8.5	4.8	1.2	0.0
82.5°	59.6	15.8	9.7	6.0	3.7	3.7	1.2	0.0	0.0	0.0	0.0
85°	17.0	7.3	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)