

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: P966180

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

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)
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-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20721.4 lumens
Efficiency: N/A
Efficacy: 141.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

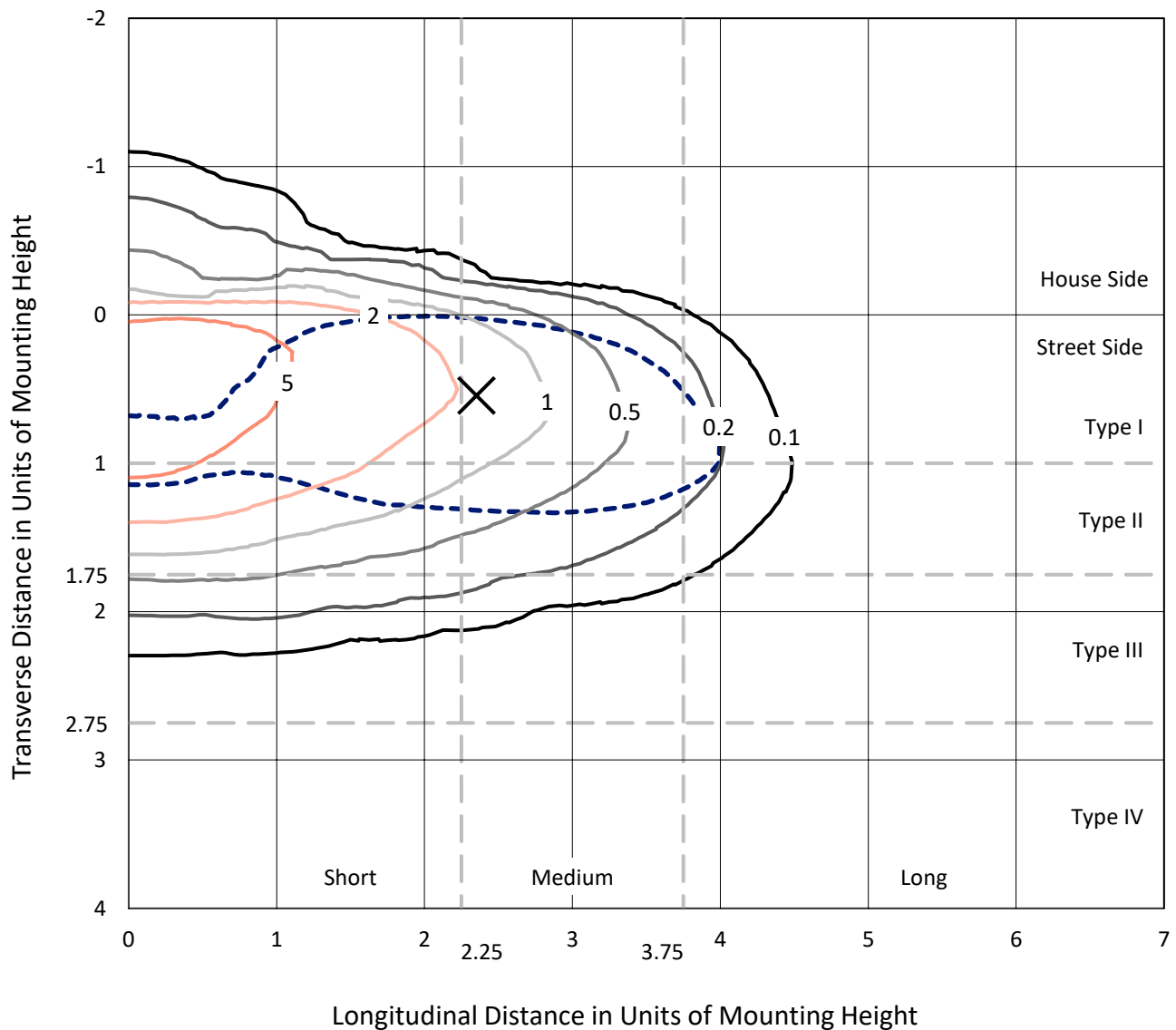
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

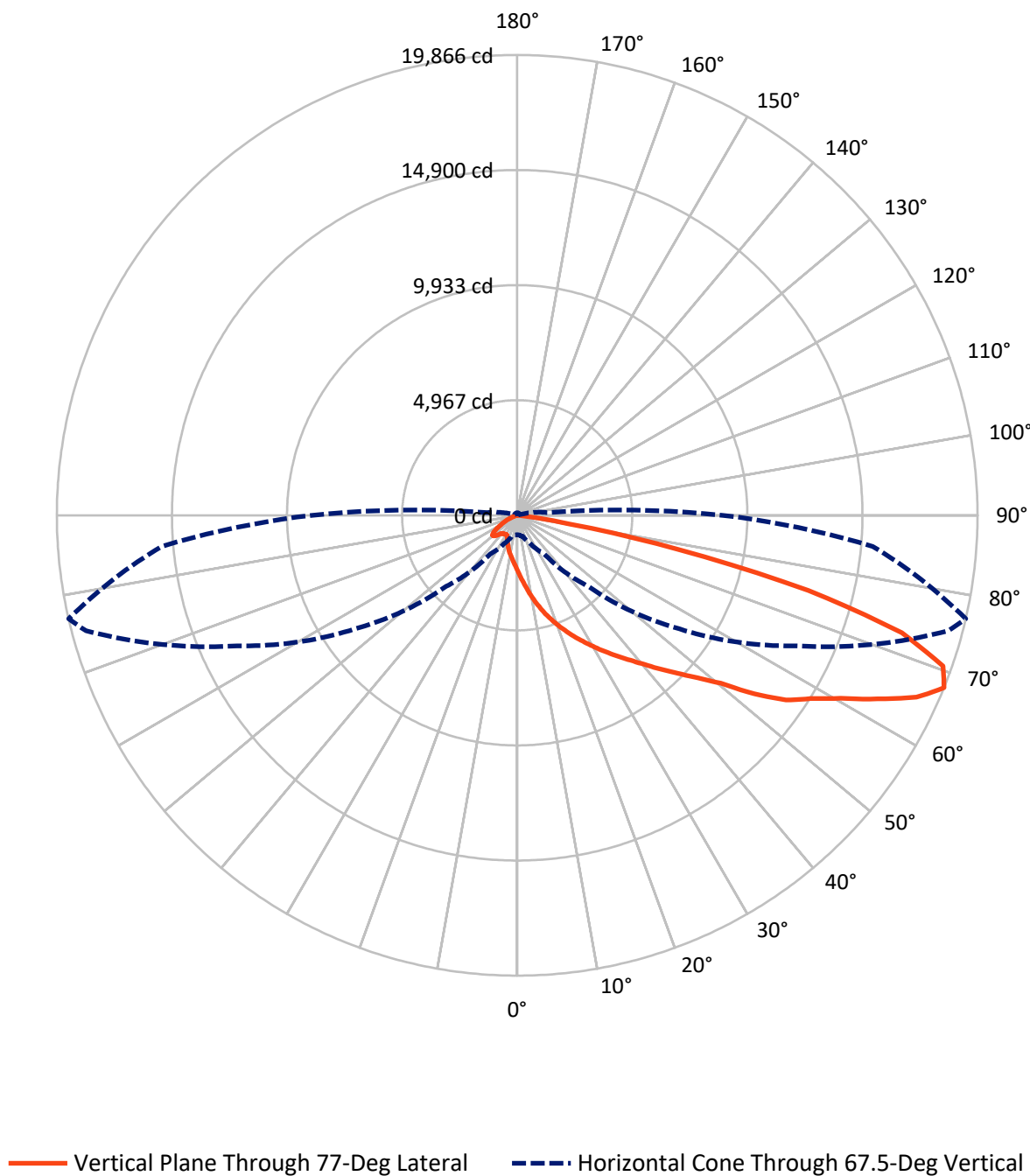
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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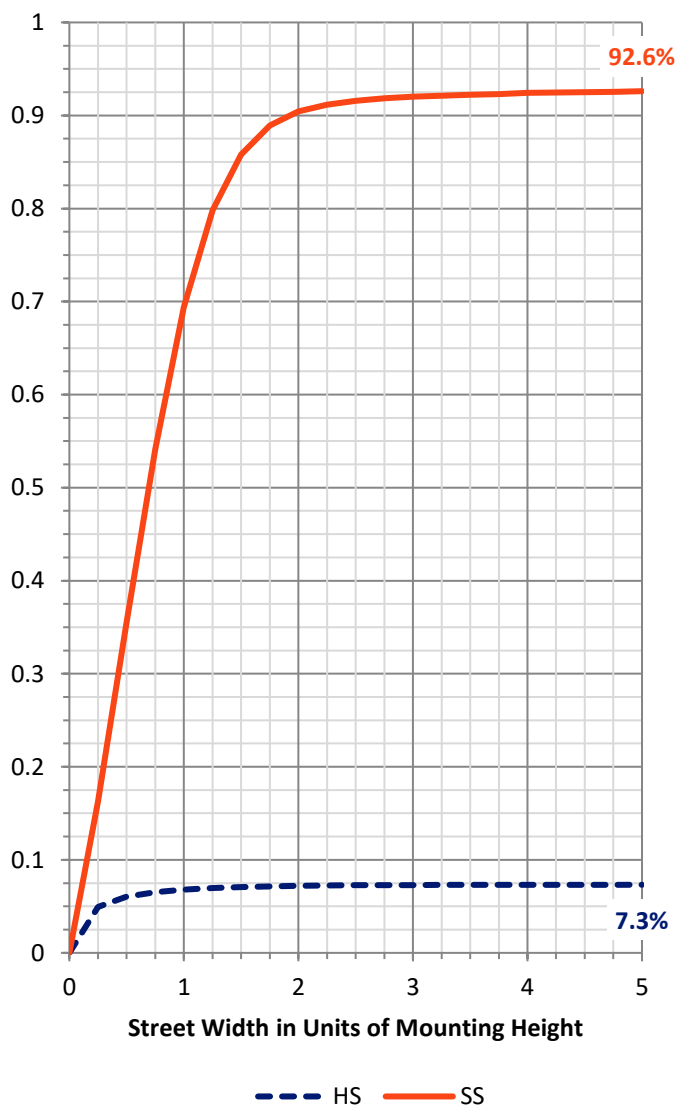
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1524.5	0.0	1524.5
	% Fixture	7.4	0.0	7.4
Street Side	Lumens	19196.9	0.0	19196.9
	% Fixture	92.6	0.0	92.6
Total	Lumens	20721.4	0.0	20721.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.9	1.2
10°-20°	854.1	4.1
20°-30°	1648.1	8.0
30°-40°	2861.2	13.8
40°-50°	4154.3	20.0
50°-60°	4770.7	23.0
60°-70°	4141.8	20.0
70°-80°	1950.9	9.4
80°-90°	96.5	0.5
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°	20721.4	100.0
0°-180°	20721.4	100.0

Coefficient of Utilization



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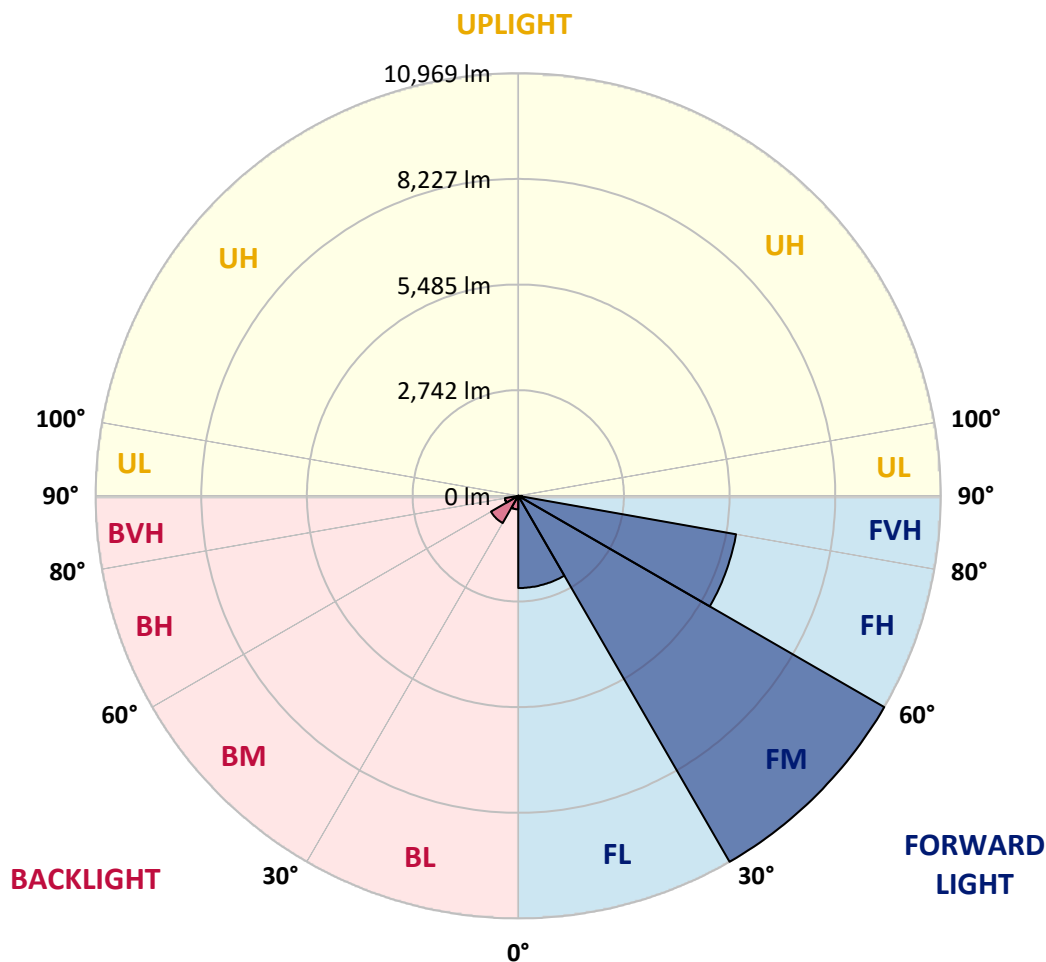
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2393.1	11.5			
FM	(30°-60°)	10969.4	52.9			
FH	(60°-80°)	5739.8	27.7			G3/7500
FVH	(80°-90°)	94.7	0.5			G1/100
BL	(0°-30°)	352.9	1.7	B1/500		
BM	(30°-60°)	816.8	3.9	B1/1000		
BH	(60°-80°)	352.9	1.7	B1/500		G1/500
BVH	(80°-90°)	1.8	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-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5
2.5°	3308.2	3328.8	3299.2	3242.6	3157.7	3102.4	2967.3	2839.9	2698.3	2653.3	2511.8
5°	4032.7	4050.7	4017.2	3955.5	3842.2	3734.2	3556.5	3290.2	3013.6	2924.7	2673.8
7.5°	4569.2	4579.5	4566.7	4510.0	4402.0	4279.7	4081.6	3766.3	3355.8	3258.1	2873.3
10°	4955.3	4988.7	4984.9	4962.9	4890.9	4791.9	4580.8	4221.8	3739.3	3613.1	3098.5
12.5°	5211.3	5248.6	5270.5	5319.4	5315.5	5252.5	5067.2	4687.6	4121.4	3973.4	3352.0
15°	5285.9	5325.8	5409.4	5522.7	5623.0	5655.2	5525.3	5144.4	4542.2	4353.1	3611.9
17.5°	5243.5	5305.2	5405.6	5584.5	5804.5	5949.9	5935.8	5585.7	4924.4	4708.2	3866.7
20°	5337.4	5396.6	5475.1	5625.6	5881.7	6145.5	6251.0	6007.8	5304.0	5077.4	4134.3
22.5°	5857.3	5847.0	5854.7	5879.1	6032.2	6293.5	6510.9	6391.3	5679.7	5448.1	4417.3
25°	6680.7	6634.4	6556.0	6423.5	6384.8	6510.9	6737.4	6731.0	6076.0	5827.6	4706.9
27.5°	7625.3	7617.5	7433.5	7114.4	6934.2	6885.3	6993.5	7061.6	6468.5	6203.4	4997.7
30°	8529.8	8550.4	8302.1	7946.9	7616.3	7424.5	7326.7	7375.6	6867.4	6608.7	5297.5
32.5°	9317.4	9339.2	9069.0	8653.4	8244.2	8012.5	7806.7	7685.8	7302.3	7020.4	5626.9
35°	9982.6	10004.4	9694.3	9234.9	8798.7	8589.0	8356.1	8025.4	7739.8	7477.3	5993.7
37.5°	10577.1	10570.6	10155.0	9691.8	9263.2	9097.3	8975.0	8443.6	8190.2	7936.7	6400.3
40°	10928.3	10955.3	10600.1	10089.4	9673.7	9552.8	9545.1	8962.2	8709.9	8464.2	6845.5
42.5°	11031.3	11078.8	10821.5	10402.0	10025.0	9893.8	10095.7	9523.2	9314.7	9075.3	7348.6
45°	10845.9	10892.3	10775.2	10484.4	10264.3	10179.4	10569.3	10104.8	9960.6	9723.9	7916.1
47.5°	10305.6	10363.5	10391.8	10329.9	10327.4	10413.6	10993.9	10717.3	10727.5	10485.6	8573.6
50°	9259.4	9357.2	9617.2	9835.9	10174.3	10598.9	11407.0	11381.3	11592.2	11383.9	9430.5
52.5°	7357.6	7496.5	8392.2	8990.5	9750.9	10564.2	11861.2	12446.7	13109.3	12804.4	10638.8
55°	5912.6	5912.6	6640.9	7760.4	8924.9	10335.1	12059.3	13139.0	14142.6	14070.6	11489.3
57.5°	4820.2	4878.1	5342.6	6332.0	7729.4	9789.6	12181.6	13573.9	14975.1	14922.4	12320.6
60°	2975.0	3099.8	3977.3	4953.9	6369.3	8818.1	12104.4	14013.9	15985.2	16027.7	13321.6
62.5°	1675.4	1721.7	2112.8	3564.2	4952.7	7512.0	11513.8	14259.7	17277.1	17457.3	14353.6
65°	1156.8	1180.0	1330.4	2218.3	3433.0	5980.8	10359.6	14106.6	18571.6	18935.7	15228.6
67.5°	840.2	851.8	945.8	1354.9	2036.9	4336.4	8550.4	13334.5	19257.4	19866.0	15395.9
70°	646.0	653.6	721.9	890.4	1203.1	2676.4	6209.9	11799.4	18760.7	19487.7	14538.9
72.5°	525.0	532.7	585.5	658.8	797.8	1582.7	3763.7	9582.4	16568.1	17353.0	12377.2
75°	442.6	452.9	500.5	548.2	625.4	1016.5	1765.5	6673.1	12459.5	12974.2	8607.0
77.5°	245.8	226.4	406.6	454.2	527.6	643.4	826.0	3927.2	6978.0	7120.9	3819.0
80°	153.1	158.3	323.0	365.4	405.3	324.3	378.3	1511.9	2419.1	2298.2	739.8
82.5°	9.0	20.6	248.4	263.7	278.0	139.0	142.8	513.4	582.9	535.3	131.2
85°	0.0	0.0	113.3	91.3	96.6	39.9	41.2	119.6	78.5	85.0	25.7
87.5°	0.0	0.0	0.0	2.6	0.0	3.9	7.7	10.2	3.9	5.1	9.0
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°	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5	2389.5
2.5°	2421.7	2331.6	2148.8	1970.0	1824.6	1689.5	1593.0	1501.6	1455.3	1452.7	1450.2
5°	2495.0	2305.8	1940.4	1617.4	1357.5	1149.0	1013.9	917.5	868.6	851.8	849.2
7.5°	2598.0	2313.5	1757.7	1308.6	1002.3	823.5	746.3	715.4	705.1	693.5	691.0
10°	2727.9	2331.6	1594.3	1053.8	790.1	700.0	669.1	656.2	648.5	640.8	638.3
12.5°	2873.3	2348.3	1432.1	874.9	694.8	648.5	626.7	611.2	601.0	591.9	589.4
15°	3014.8	2358.6	1263.6	750.2	646.0	608.6	585.5	568.8	554.6	544.3	543.0
17.5°	3155.1	2372.8	1105.4	675.6	606.1	568.8	545.6	525.0	513.4	501.8	500.5
20°	3310.7	2370.2	956.0	622.8	566.2	528.9	504.4	485.1	473.6	460.6	459.4
22.5°	3454.9	2357.3	824.8	577.8	525.0	488.9	462.0	442.6	431.0	420.8	419.4
25°	3620.9	2347.0	715.4	536.6	486.4	450.4	420.8	402.7	389.9	380.9	379.6
27.5°	3780.4	2331.6	635.6	499.3	449.1	414.3	386.0	365.4	353.8	347.4	347.4
30°	3937.4	2327.7	606.1	463.2	415.6	380.9	352.6	333.2	324.3	321.6	320.4
32.5°	4126.5	2338.0	618.9	450.4	384.8	350.0	323.0	308.8	299.8	299.8	299.8
35°	4328.6	2335.5	638.3	462.0	364.2	319.1	298.5	289.6	280.5	280.5	280.5
37.5°	4582.1	2339.3	653.6	481.2	356.4	293.4	281.8	270.2	265.1	265.1	265.1
40°	4960.4	2466.7	646.0	497.9	353.8	275.3	252.3	248.4	244.5	244.5	244.5
42.5°	5423.6	2743.3	656.2	499.3	352.6	262.5	231.6	239.3	230.3	229.1	227.8
45°	5930.6	3045.7	721.9	472.2	351.3	256.0	221.3	230.3	216.2	216.2	216.2
47.5°	6433.7	3345.5	788.7	433.7	347.4	254.8	212.3	207.2	203.3	204.6	204.6
50°	7127.2	3590.1	814.5	380.9	338.5	252.3	195.6	196.9	194.3	196.9	196.9
52.5°	7882.6	3641.5	783.6	321.6	312.7	244.5	184.0	189.1	187.9	190.4	190.4
55°	8353.5	3586.2	647.2	267.6	272.8	213.6	172.4	182.8	182.8	182.8	182.8
57.5°	8839.9	3350.7	459.4	217.5	226.4	175.0	162.2	176.3	175.0	173.7	173.7
60°	9189.9	2969.8	302.4	178.9	180.2	144.1	150.6	165.9	164.7	158.3	158.3
62.5°	9451.1	2549.1	194.3	151.8	137.7	130.0	137.7	150.6	145.4	131.2	128.6
65°	9421.5	1966.2	149.2	130.0	113.3	113.3	119.6	131.2	115.8	92.7	90.1
67.5°	8872.1	1330.4	123.5	109.4	95.2	93.9	99.1	109.4	99.1	78.5	76.0
70°	7890.3	869.8	99.1	85.0	76.0	69.5	79.7	93.9	83.6	63.0	60.5
72.5°	6404.1	530.1	74.6	61.8	55.4	45.0	63.0	77.2	66.9	46.3	43.8
75°	4143.4	270.2	51.5	39.9	29.6	27.1	46.3	57.9	46.3	28.3	24.5
77.5°	1585.3	113.3	28.3	18.0	15.5	12.9	25.7	34.7	19.3	6.5	5.1
80°	304.9	47.6	14.1	9.0	7.7	5.1	3.9	2.6	0.0	0.0	0.0
82.5°	52.8	15.5	5.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	18.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.5	0.0	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)