

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: P963142

Luminaire Tested: **NAV-SB2D-830-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963142
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-SB2D-830-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA 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: 15869 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

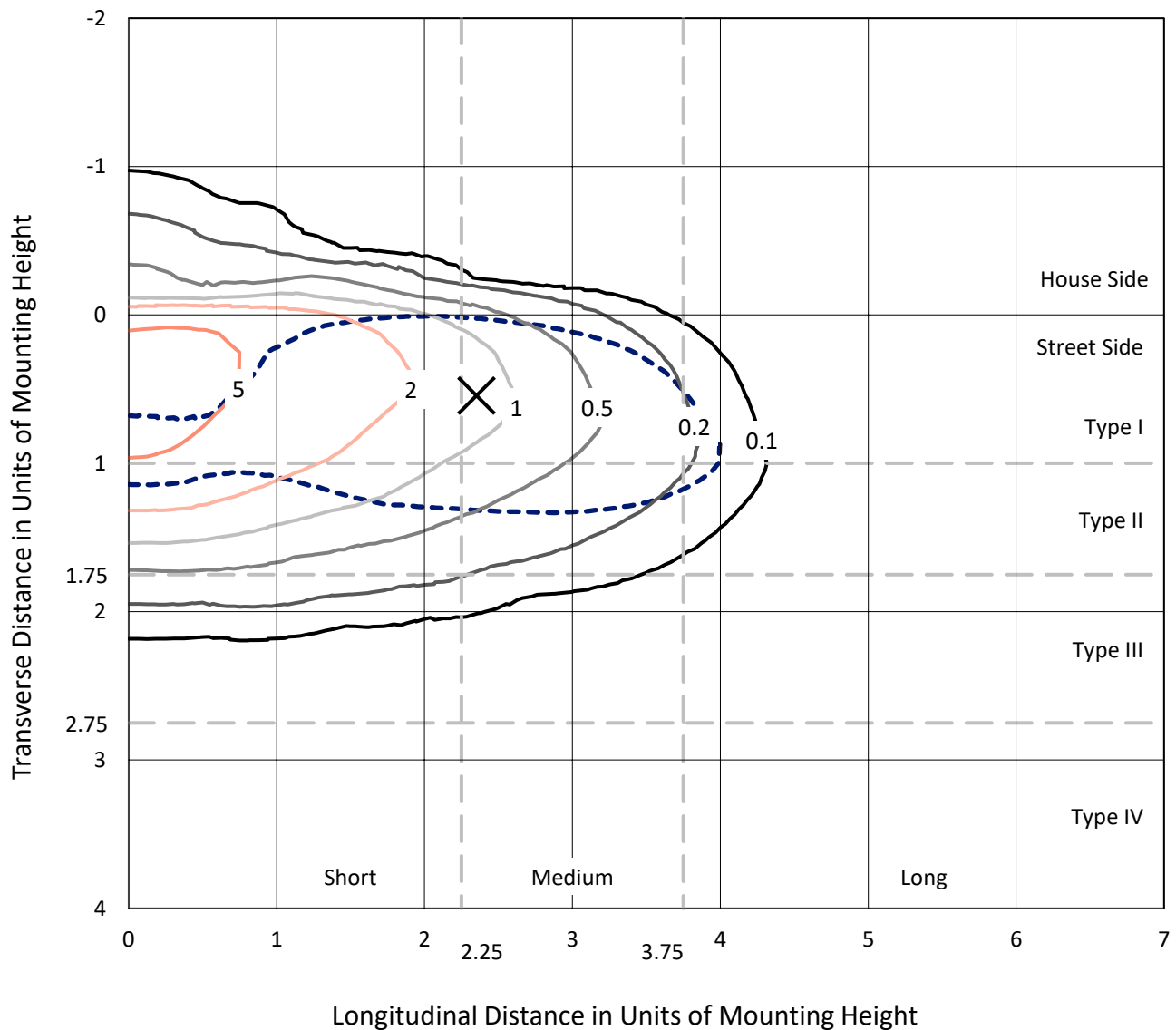
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

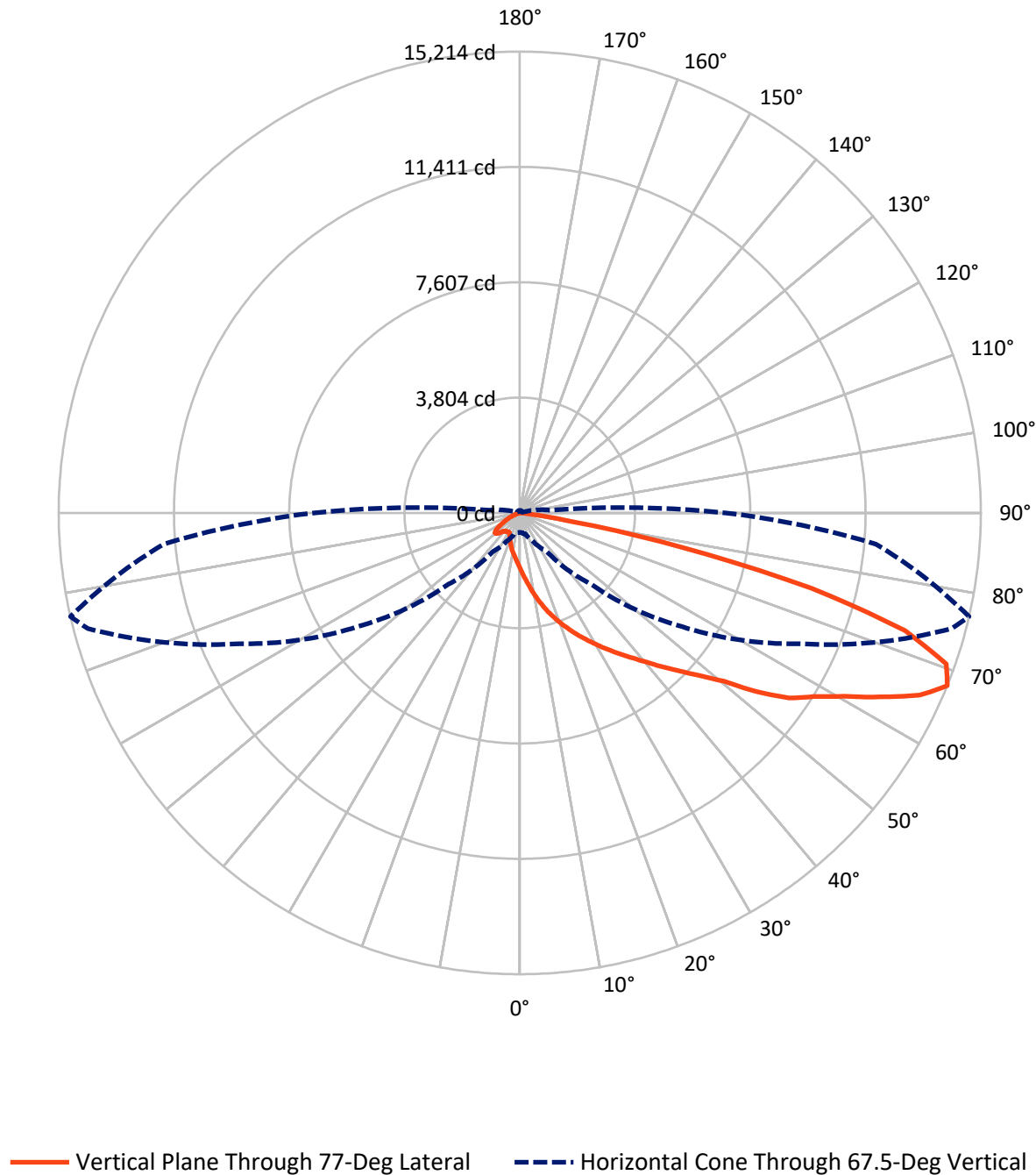
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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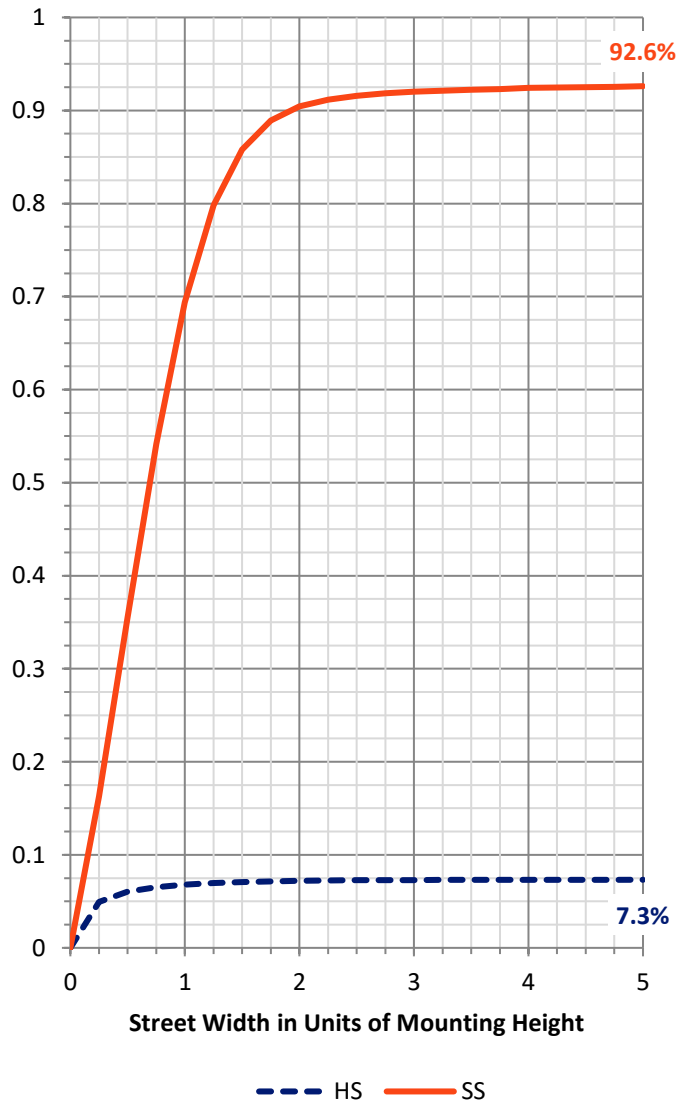
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1167.5	0.0	1167.5
	% Fixture	7.4	0.0	7.4
Street Side	Lumens	14701.6	0.0	14701.6
	% Fixture	92.6	0.0	92.6
Total	Lumens	15869.0	0.0	15869.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.8	1.2
10°-20°	654.1	4.1
20°-30°	1262.2	8.0
30°-40°	2191.2	13.8
40°-50°	3181.5	20.0
50°-60°	3653.5	23.0
60°-70°	3171.9	20.0
70°-80°	1494.0	9.4
80°-90°	73.9	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°	15869.0	100.0
0°-180°	15869.0	100.0

Coefficient of Utilization



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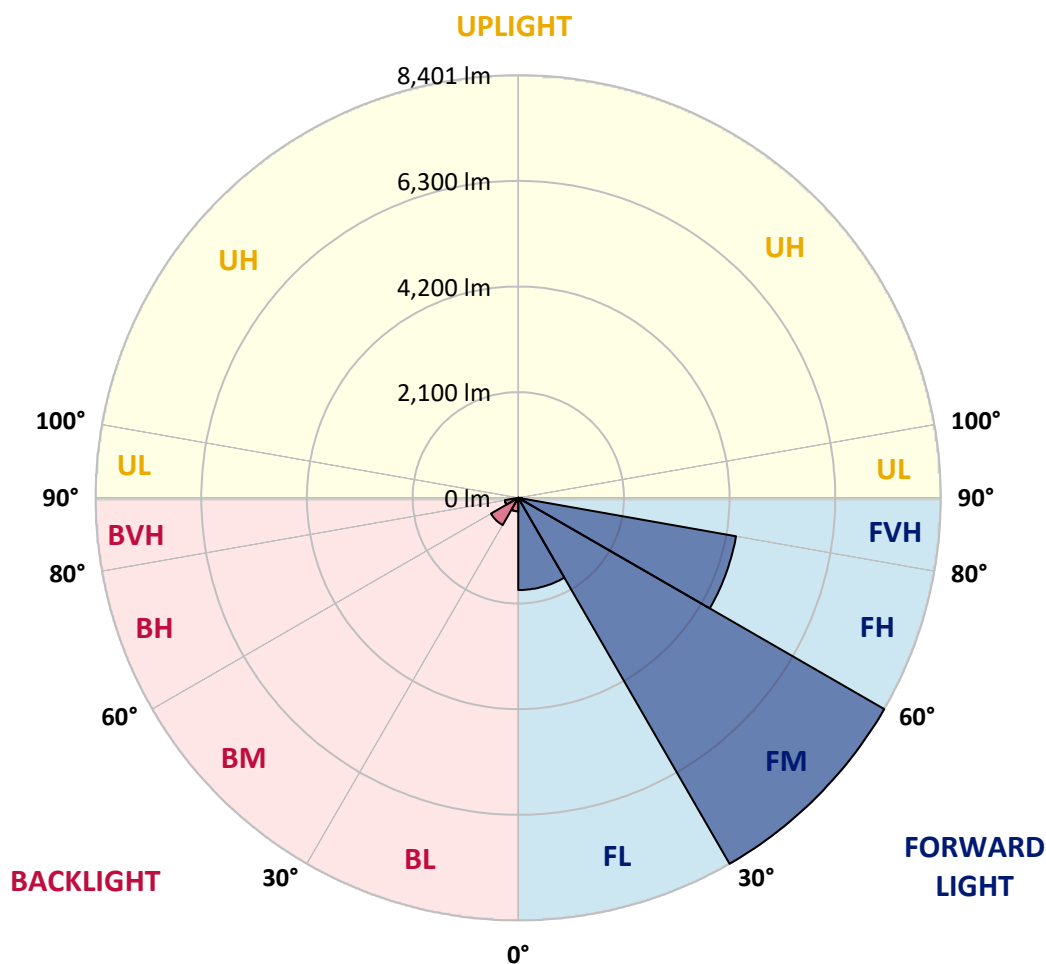
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1832.7	11.5			
FM	(30°-60°)	8400.6	52.9			
FH	(60°-80°)	4395.7	27.7			G2/5000
FVH	(80°-90°)	72.5	0.5			G1/100
BL	(0°-30°)	270.3	1.7	B1/500		
BM	(30°-60°)	625.6	3.9	B1/1000		
BH	(60°-80°)	270.3	1.7	B1/500		G1/500
BVH	(80°-90°)	1.4	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-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9
2.5°	2533.5	2549.3	2526.6	2483.3	2418.3	2375.8	2272.4	2174.8	2066.4	2032.0	1923.5
5°	3088.3	3102.2	3076.5	3029.2	2942.5	2859.7	2723.7	2519.8	2307.9	2239.8	2047.7
7.5°	3499.2	3507.1	3497.3	3453.9	3371.1	3277.5	3125.7	2884.4	2570.0	2495.1	2200.5
10°	3794.9	3820.5	3817.5	3800.8	3745.6	3669.7	3508.2	3233.2	2863.6	2767.1	2372.9
12.5°	3990.9	4019.5	4036.3	4073.8	4070.8	4022.5	3880.6	3589.9	3156.3	3043.0	2567.0
15°	4048.1	4078.7	4142.7	4229.5	4306.3	4330.9	4231.4	3939.7	3478.5	3333.7	2766.1
17.5°	4015.6	4062.9	4139.8	4276.7	4445.2	4556.6	4545.8	4277.7	3771.2	3605.6	2961.2
20°	4087.5	4132.9	4193.0	4308.3	4504.4	4706.4	4787.2	4600.9	4062.0	3888.4	3166.1
22.5°	4485.6	4477.8	4483.7	4502.4	4619.7	4819.8	4986.2	4894.6	4349.7	4172.3	3383.0
25°	5116.3	5080.8	5020.8	4919.3	4889.7	4986.2	5159.6	5154.7	4653.2	4463.0	3604.7
27.5°	5839.6	5833.7	5692.8	5448.4	5310.4	5273.0	5355.8	5408.0	4953.7	4750.8	3827.3
30°	6532.4	6548.1	6358.0	6085.9	5832.8	5685.9	5611.1	5648.5	5259.2	5061.1	4057.0
32.5°	7135.4	7152.2	6945.3	6627.0	6313.6	6136.3	5978.6	5886.0	5592.3	5376.4	4309.3
35°	7645.0	7661.7	7424.2	7072.4	6738.4	6577.7	6399.4	6146.1	5927.4	5726.3	4590.2
37.5°	8100.2	8095.2	7777.0	7422.2	7094.1	6966.9	6873.3	6466.3	6272.3	6078.1	4901.5
40°	8369.2	8389.9	8117.9	7726.8	7408.4	7315.8	7309.9	6863.5	6670.4	6482.1	5242.5
42.5°	8448.0	8484.5	8287.4	7966.2	7677.5	7576.9	7731.7	7293.2	7133.5	6950.2	5627.8
45°	8306.2	8341.7	8252.0	8029.2	7860.7	7795.7	8094.3	7738.5	7628.2	7446.8	6062.4
47.5°	7892.3	7936.6	7958.3	7910.9	7909.0	7975.0	8419.5	8207.6	8215.5	8030.3	6565.8
50°	7091.2	7166.0	7365.0	7532.6	7791.7	8117.0	8735.8	8716.1	8877.7	8718.0	7222.2
52.5°	5634.6	5741.1	6427.0	6885.1	7467.5	8090.3	9083.7	9532.0	10039.5	9806.0	8147.5
55°	4528.0	4528.0	5085.7	5943.1	6834.9	7914.9	9235.5	10062.2	10830.8	10775.6	8798.9
57.5°	3691.4	3735.7	4091.5	4849.3	5919.5	7497.2	9329.0	10395.2	11468.4	11427.9	9435.4
60°	2278.3	2373.9	3046.0	3793.9	4877.9	6753.1	9269.9	10732.3	12242.0	12274.5	10202.1
62.5°	1283.0	1318.5	1618.1	2729.7	3792.9	5752.9	8817.6	10920.5	13231.3	13369.3	10992.4
65°	885.9	903.6	1019.0	1698.8	2629.1	4580.2	7933.7	10803.2	14222.6	14501.5	11662.6
67.5°	643.5	652.3	724.3	1037.6	1559.9	3320.9	6548.1	10212.0	14747.9	15214.0	11790.6
70°	494.7	500.6	552.8	681.9	921.4	2049.7	4755.7	9036.4	14367.5	14924.3	11134.4
72.5°	402.0	408.0	448.3	504.5	611.0	1212.1	2882.4	7338.5	12688.4	13289.4	9478.8
75°	339.0	346.9	383.3	419.8	478.9	778.5	1352.0	5110.4	9541.8	9936.0	6591.5
77.5°	188.2	173.4	311.4	347.9	404.1	492.7	632.6	3007.6	5343.9	5453.3	2924.7
80°	117.3	121.3	247.3	279.8	310.4	248.4	289.7	1157.8	1852.6	1759.9	566.6
82.5°	6.9	15.8	190.1	202.0	212.9	106.4	109.4	393.2	446.4	409.9	100.6
85°	0.0	0.0	86.7	70.0	73.9	30.5	31.6	91.6	60.1	65.1	19.7
87.5°	0.0	0.0	0.0	1.9	0.0	3.0	5.9	7.9	3.0	3.9	6.9
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°	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9	1829.9
2.5°	1854.5	1785.6	1645.6	1508.7	1397.4	1293.9	1220.0	1149.9	1114.5	1112.5	1110.6
5°	1910.7	1765.9	1486.0	1238.7	1039.7	880.0	776.5	702.6	665.1	652.3	650.4
7.5°	1989.5	1771.8	1346.1	1002.1	767.6	630.7	571.5	547.9	540.0	531.2	529.2
10°	2089.1	1785.6	1221.0	807.1	605.1	536.1	512.4	502.6	496.6	490.8	488.7
12.5°	2200.5	1798.4	1096.8	670.0	532.2	496.6	479.9	468.1	460.2	453.3	451.3
15°	2308.8	1806.3	967.7	574.5	494.7	466.1	448.3	435.5	424.8	416.9	415.8
17.5°	2416.2	1817.1	846.4	517.3	464.1	435.5	417.8	402.0	393.2	384.3	383.3
20°	2535.5	1815.2	732.2	476.9	433.6	405.0	386.3	371.5	362.6	352.8	351.8
22.5°	2645.8	1805.3	631.7	442.5	402.0	374.4	353.7	339.0	330.2	322.3	321.2
25°	2773.0	1797.4	547.9	410.9	372.5	344.9	322.3	308.4	298.6	291.7	290.7
27.5°	2895.2	1785.6	486.8	382.3	343.9	317.3	295.6	279.8	271.0	266.1	266.1
30°	3015.4	1782.7	464.1	354.8	318.3	291.7	270.0	255.2	248.4	246.3	245.4
32.5°	3160.3	1790.5	474.0	344.9	294.7	268.0	247.3	236.5	229.6	229.6	229.6
35°	3315.0	1788.5	488.7	353.7	278.9	244.4	228.6	221.7	214.8	214.8	214.8
37.5°	3509.1	1791.5	500.6	368.6	273.0	224.7	215.8	206.9	203.0	203.0	203.0
40°	3798.9	1889.1	494.7	381.4	271.0	210.8	193.1	190.1	187.3	187.3	187.3
42.5°	4153.6	2100.9	502.6	382.3	270.0	201.0	177.4	183.3	176.4	175.4	174.5
45°	4541.8	2332.5	552.8	361.6	269.1	196.1	169.5	176.4	165.5	165.5	165.5
47.5°	4927.2	2562.1	604.0	332.1	266.1	195.2	162.6	158.7	155.7	156.7	156.7
50°	5458.2	2749.4	623.8	291.7	259.1	193.1	149.8	150.8	148.8	150.8	150.8
52.5°	6036.7	2788.7	600.1	246.3	239.4	187.3	140.9	144.8	143.9	145.9	145.9
55°	6397.3	2746.4	495.7	205.0	208.9	163.6	132.0	139.9	139.9	139.9	139.9
57.5°	6769.9	2566.1	351.8	166.6	173.4	134.0	124.1	135.0	134.0	133.0	133.0
60°	7038.0	2274.4	231.5	136.9	138.0	110.4	115.3	127.1	126.2	121.3	121.3
62.5°	7237.9	1952.1	148.8	116.2	105.5	99.5	105.5	115.3	111.3	100.6	98.5
65°	7215.3	1505.7	114.3	99.5	86.7	86.7	91.6	100.6	88.7	70.9	69.0
67.5°	6794.5	1019.0	94.6	83.7	72.9	72.0	75.8	83.7	75.8	60.1	58.1
70°	6042.6	666.1	75.8	65.1	58.1	53.2	61.1	72.0	64.1	48.3	46.3
72.5°	4904.4	406.0	57.2	47.3	42.3	34.4	48.3	59.1	51.2	35.5	33.5
75°	3173.1	206.9	39.5	30.5	22.7	20.7	35.5	44.4	35.5	21.7	18.8
77.5°	1214.0	86.7	21.7	13.8	11.8	9.8	19.7	26.6	14.8	4.9	3.9
80°	233.5	36.5	10.9	6.9	5.9	3.9	3.0	1.9	0.0	0.0	0.0
82.5°	40.4	11.8	3.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	13.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.9	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)