

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: P965762

Luminaire Tested: **NAV-SB4A-830-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965762
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-830-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14117.3 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 114
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



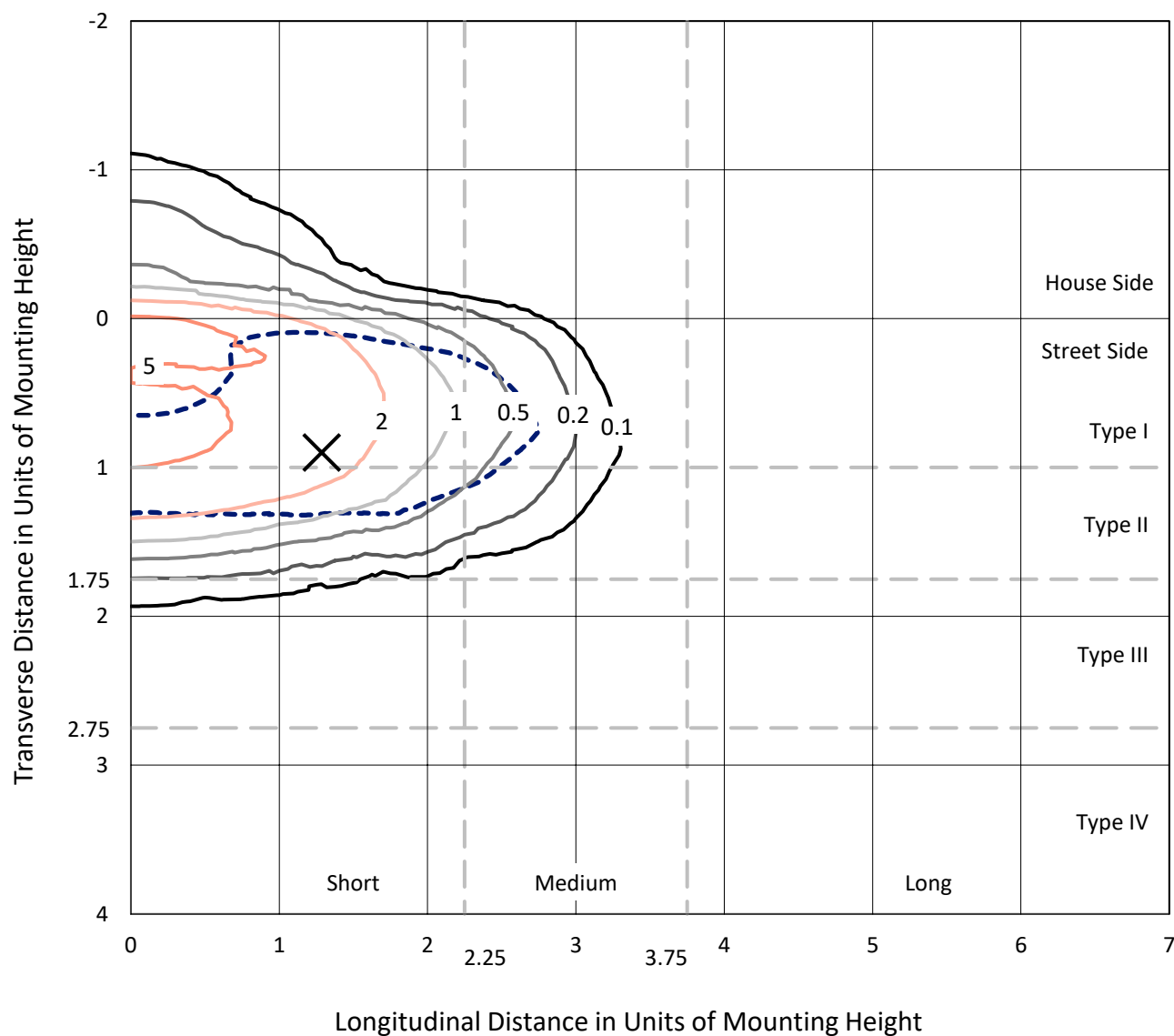
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

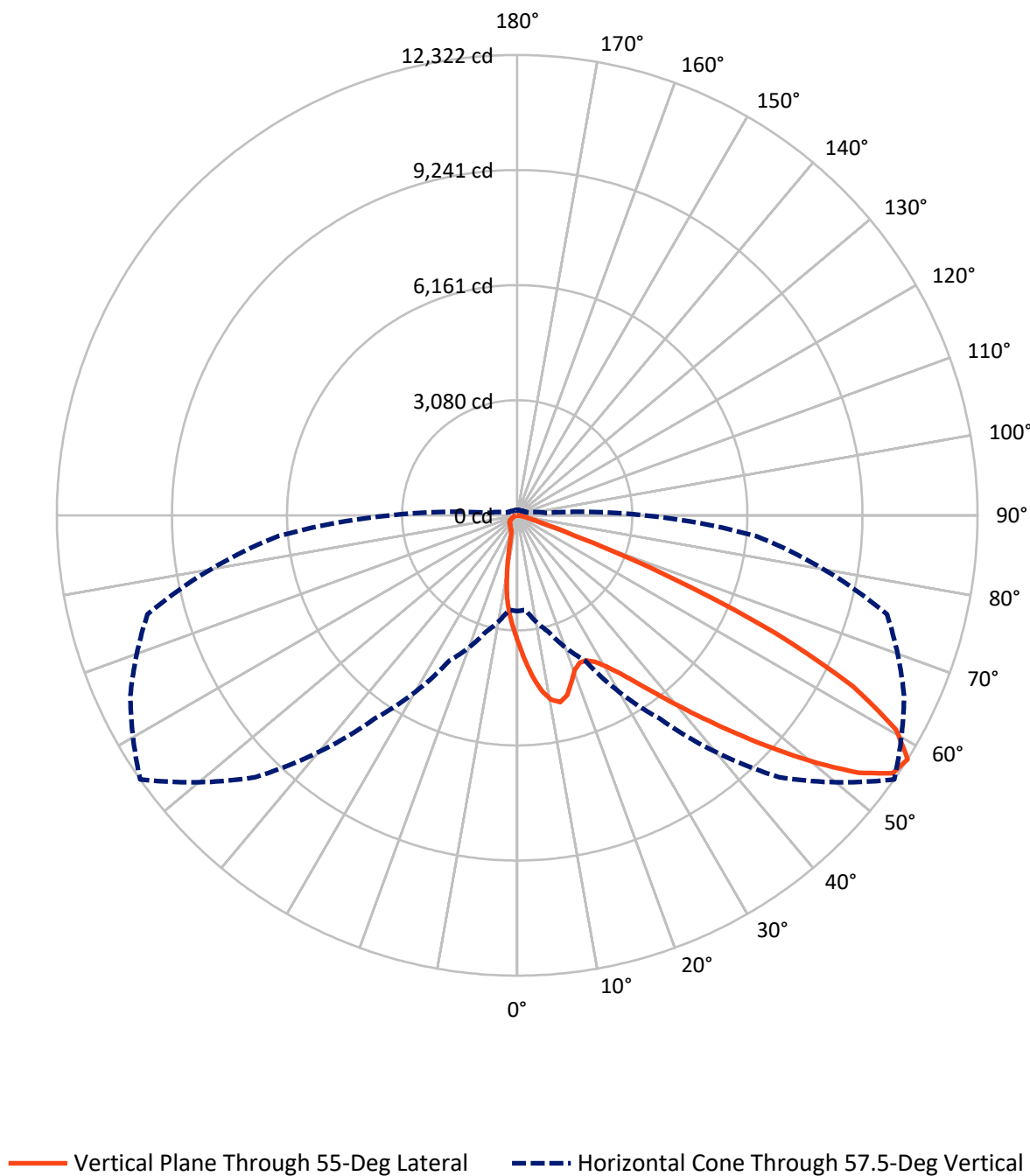


Based on 25 foot mounting height. Maximum calculated value = 7.8 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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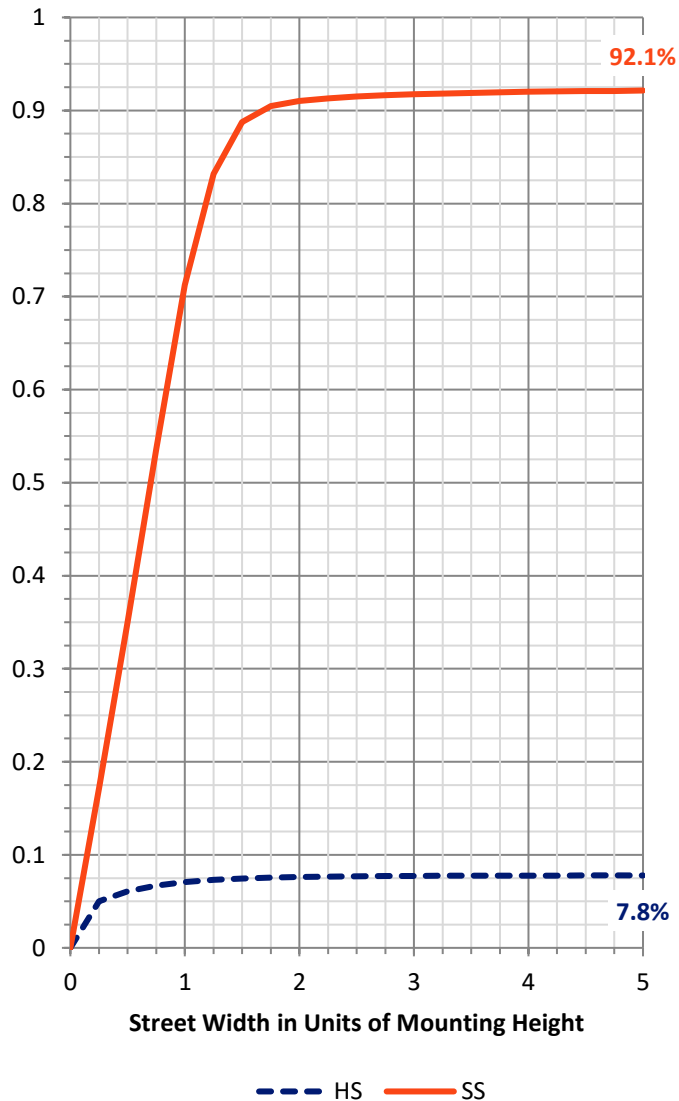
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1102.5	0.0	1102.5
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	13014.8	0.0	13014.8
	% Fixture	92.2	0.0	92.2
Total	Lumens	14117.3	0.0	14117.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.5	2.2
10°-20°	764.6	5.4
20°-30°	1223.3	8.7
30°-40°	2070.5	14.7
40°-50°	3399.4	24.1
50°-60°	3736.2	26.5
60°-70°	2143.1	15.2
70°-80°	437.9	3.1
80°-90°	25.8	0.2
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°	14117.3	100.0
0°-180°	14117.3	100.0

Coefficient of Utilization



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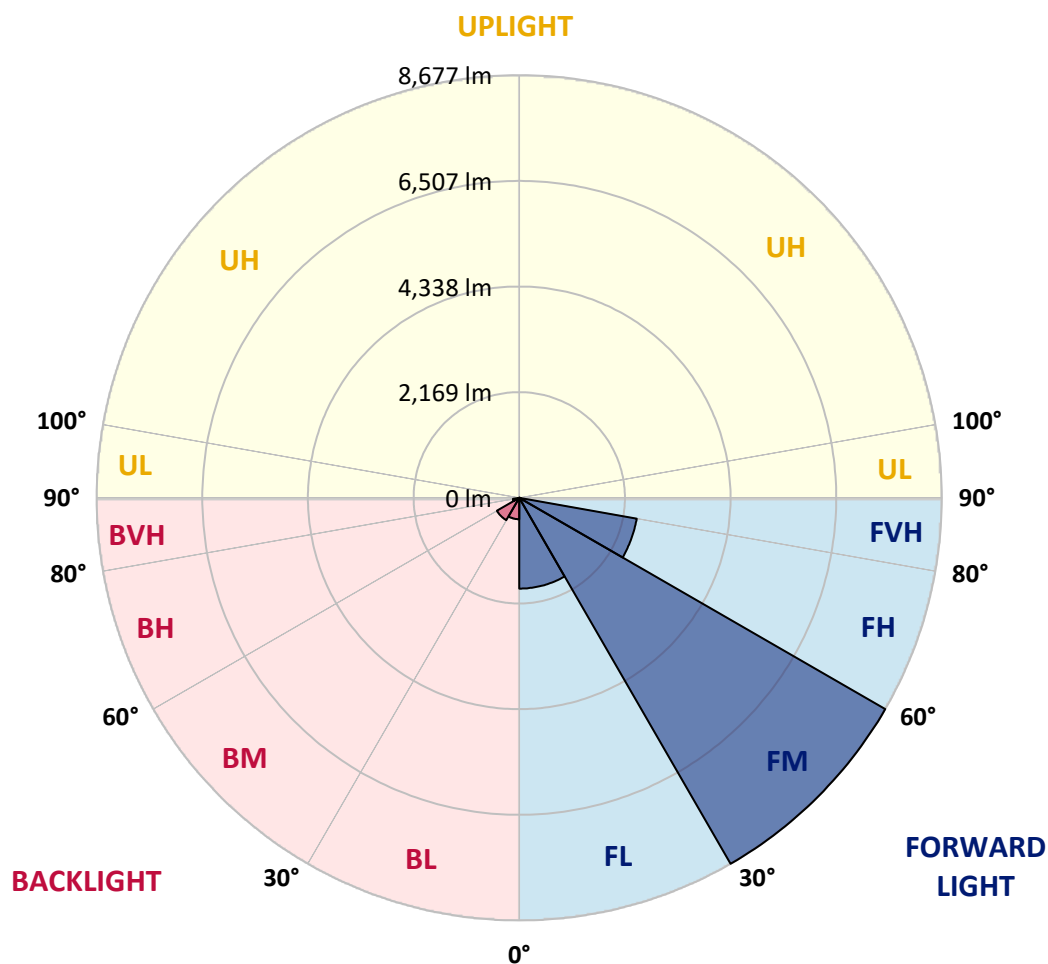
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1864.3	13.2			
FM	(30°-60°)	8676.6	61.5			
FH	(60°-80°)	2449.8	17.4			G2/5000
FVH	(80°-90°)	24.1	0.2			G1/100
BL	(0°-30°)	440.1	3.1	B1/500		
BM	(30°-60°)	529.5	3.8	B1/1000		
BH	(60°-80°)	131.1	0.9	B1/500		G1/500
BVH	(80°-90°)	1.7	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 Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0
2.5°	4221.1	4168.0	4160.2	4149.7	4048.7	3973.0	3863.3	3743.2	3608.2	3470.6	3409.8
5°	4876.5	4834.8	4826.9	4778.2	4663.2	4534.5	4339.4	4093.1	3841.5	3545.6	3418.5
7.5°	5003.6	4995.8	5031.5	5029.8	5014.1	4912.2	4747.7	4454.3	4076.5	3637.8	3441.1
10°	4436.9	4457.0	4563.2	4656.4	4907.9	5054.2	5018.5	4776.5	4318.5	3743.2	3466.3
12.5°	3920.7	3897.3	3973.0	4078.3	4370.8	4806.0	5130.7	5045.5	4595.4	3862.4	3503.8
15°	3596.9	3587.3	3630.0	3678.7	3901.6	4340.4	5000.2	5263.9	4861.8	4003.4	3560.3
17.5°	3493.3	3485.5	3498.5	3510.7	3655.3	3994.7	4689.4	5398.0	5116.8	4164.5	3623.1
20°	3577.8	3567.3	3565.6	3556.0	3616.1	3847.6	4408.2	5407.6	5345.8	4310.7	3677.0
22.5°	3824.2	3812.0	3769.2	3731.0	3736.2	3867.6	4282.9	5311.9	5518.1	4447.4	3710.9
25°	4270.7	4250.7	4161.9	4033.1	3951.2	4006.9	4302.0	5185.6	5682.6	4554.5	3694.4
27.5°	4829.6	4803.5	4689.4	4497.9	4310.7	4242.8	4440.4	5098.6	5819.3	4636.3	3658.7
30°	5377.2	5343.1	5230.9	5082.0	4808.7	4594.6	4690.3	5136.9	5982.1	4721.6	3611.7
32.5°	5968.2	5936.0	5787.2	5602.5	5376.2	5088.1	5032.3	5324.0	6181.5	4840.9	3578.7
35°	6715.9	6665.5	6453.9	6202.4	5962.1	5670.5	5495.5	5646.9	6446.9	5022.8	3596.9
37.5°	7567.3	7499.4	7271.4	6924.0	6610.6	6284.2	6059.6	6091.0	6836.0	5266.6	3653.5
40°	8369.8	8308.0	8097.4	7770.1	7376.6	6980.6	6741.2	6671.5	7373.1	5563.4	3752.7
42.5°	8851.3	8795.5	8706.8	8568.4	8236.7	7832.7	7530.7	7380.1	8008.6	5918.6	3873.8
45°	8878.2	8829.6	8948.8	9109.8	9044.5	8775.5	8407.4	8131.3	8646.7	6252.0	3999.1
47.5°	8446.5	8413.4	8775.5	9337.9	9618.2	9731.3	9391.9	8819.9	9173.3	6491.3	4050.5
50°	7269.6	7257.4	8002.6	9035.0	9836.7	10568.8	10430.4	9460.6	9581.6	6614.9	4001.7
52.5°	6303.3	6259.0	6693.2	8065.2	9519.0	11009.2	11445.4	10089.2	9867.2	6638.4	3887.6
55°	4780.8	4741.6	5286.5	6442.6	8494.4	10852.6	12188.0	10737.7	10071.8	6578.3	3683.1
57.5°	2564.5	2540.2	3228.6	4288.1	6640.2	9912.5	12321.9	11423.6	10244.1	6419.1	3396.7
60°	998.5	994.1	1251.8	2080.5	4035.6	8064.4	11645.6	11835.4	10352.0	6223.2	3157.3
62.5°	604.1	617.2	659.0	934.1	1782.8	5009.8	10086.5	11367.0	10424.2	6043.9	2959.7
65°	499.7	500.5	505.7	641.5	853.9	2096.1	7593.4	9826.3	10245.8	5724.4	2679.5
67.5°	428.2	436.1	456.1	509.2	602.4	919.2	4371.6	7611.6	9160.3	4981.0	2242.4
70°	337.7	348.2	373.4	418.7	464.8	575.4	1615.6	5064.6	6998.0	3754.5	1695.8
72.5°	284.6	283.8	296.8	340.4	369.1	404.8	621.6	2837.8	4067.0	1792.4	839.2
75°	220.3	229.0	245.5	284.6	302.1	293.4	336.9	1036.8	1457.2	543.1	285.6
77.5°	172.4	179.3	194.1	232.5	249.8	208.1	194.1	370.8	468.3	195.0	128.8
80°	77.5	83.5	132.3	171.5	203.7	143.6	105.4	189.7	208.1	88.8	65.3
82.5°	13.9	23.5	77.5	90.5	104.4	93.2	54.8	98.4	101.9	35.7	22.7
85°	0.8	1.7	27.0	33.1	41.8	30.4	16.5	39.2	33.9	12.2	8.7
87.5°	0.0	0.0	0.0	0.8	0.8	4.3	5.2	7.0	5.2	4.3	3.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0	3402.0
2.5°	3347.0	3223.5	3103.4	3005.0	2947.5	2850.0	2785.6	2775.2	2748.2	2771.7
5°	3282.7	3061.6	2837.8	2637.6	2473.1	2260.7	2102.3	2035.2	1976.9	1996.9
7.5°	3252.2	2903.1	2554.9	2212.8	1861.1	1521.6	1269.2	1163.9	1083.7	1095.1
10°	3211.3	2738.6	2192.8	1670.5	1199.6	864.4	690.3	625.9	590.2	591.1
12.5°	3180.0	2541.9	1772.3	1132.5	730.3	551.9	497.9	482.3	471.8	472.7
15°	3164.3	2310.4	1357.1	754.7	522.3	467.5	454.4	447.4	440.4	439.6
17.5°	3138.1	2052.7	993.2	551.0	457.0	437.9	426.5	418.7	410.0	408.3
20°	3099.0	1760.1	726.0	465.8	428.2	413.5	397.8	387.3	376.9	375.2
22.5°	3026.7	1451.1	558.0	430.9	407.4	390.8	371.7	359.5	349.1	347.4
25°	2892.7	1161.2	470.1	409.2	389.1	369.1	348.2	331.7	322.1	320.3
27.5°	2722.9	912.2	426.5	389.1	365.6	347.4	323.8	308.1	299.4	297.8
30°	2522.7	702.5	401.3	366.4	337.7	322.1	301.1	288.1	282.9	282.9
32.5°	2306.9	561.5	390.8	343.9	313.3	296.0	279.4	274.2	272.4	271.6
35°	2104.0	487.5	385.6	325.5	291.6	275.1	268.1	269.0	272.4	272.4
37.5°	1923.8	464.0	383.0	312.5	272.4	257.7	262.0	269.9	266.4	266.4
40°	1761.1	466.6	381.3	302.9	256.8	248.0	256.8	250.7	242.0	241.1
42.5°	1636.5	488.3	377.8	295.1	247.2	241.1	237.7	228.1	227.2	229.0
45°	1546.0	507.5	376.9	291.6	236.8	225.5	221.1	211.6	229.0	233.3
47.5°	1438.9	507.5	376.9	279.4	219.4	215.0	208.1	197.6	215.0	219.4
50°	1300.5	475.3	362.1	265.5	205.4	202.8	190.6	177.6	174.1	176.7
52.5°	1125.6	417.0	324.7	246.3	191.5	186.2	171.5	162.0	159.3	159.3
55°	926.2	349.1	274.2	218.5	176.7	167.2	156.7	152.3	149.8	148.0
57.5°	753.0	286.4	220.3	194.1	162.8	150.6	147.1	141.9	137.6	134.9
60°	618.1	225.5	181.9	172.4	148.8	137.6	136.6	129.7	118.4	116.6
62.5°	477.0	165.4	153.2	149.8	134.9	125.4	123.6	109.7	92.2	88.8
65°	336.9	128.8	123.6	131.4	120.1	111.4	107.1	86.2	67.9	65.3
67.5°	236.8	107.9	97.5	114.9	104.4	93.2	90.5	73.1	56.6	54.8
70°	168.9	87.9	80.1	98.4	83.5	81.8	76.6	60.9	46.1	44.4
72.5°	119.3	67.0	61.8	85.3	57.5	70.5	62.6	47.0	34.8	33.1
75°	87.9	47.9	43.6	49.6	41.8	53.1	44.4	31.4	21.7	20.9
77.5°	64.4	30.4	26.1	24.4	24.4	33.1	24.4	13.0	9.5	8.7
80°	45.3	13.9	12.2	10.5	9.5	7.8	3.5	1.7	0.8	0.8
82.5°	27.0	6.0	6.0	4.3	2.6	0.0	0.0	0.0	0.0	0.0
85°	6.0	2.6	2.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.8	0.8	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

(END OF REPORT)