

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: P966289

Luminaire Tested: **NAV-SB4B-830-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966289
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-SB4B-830-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA 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: 17722.3 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

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

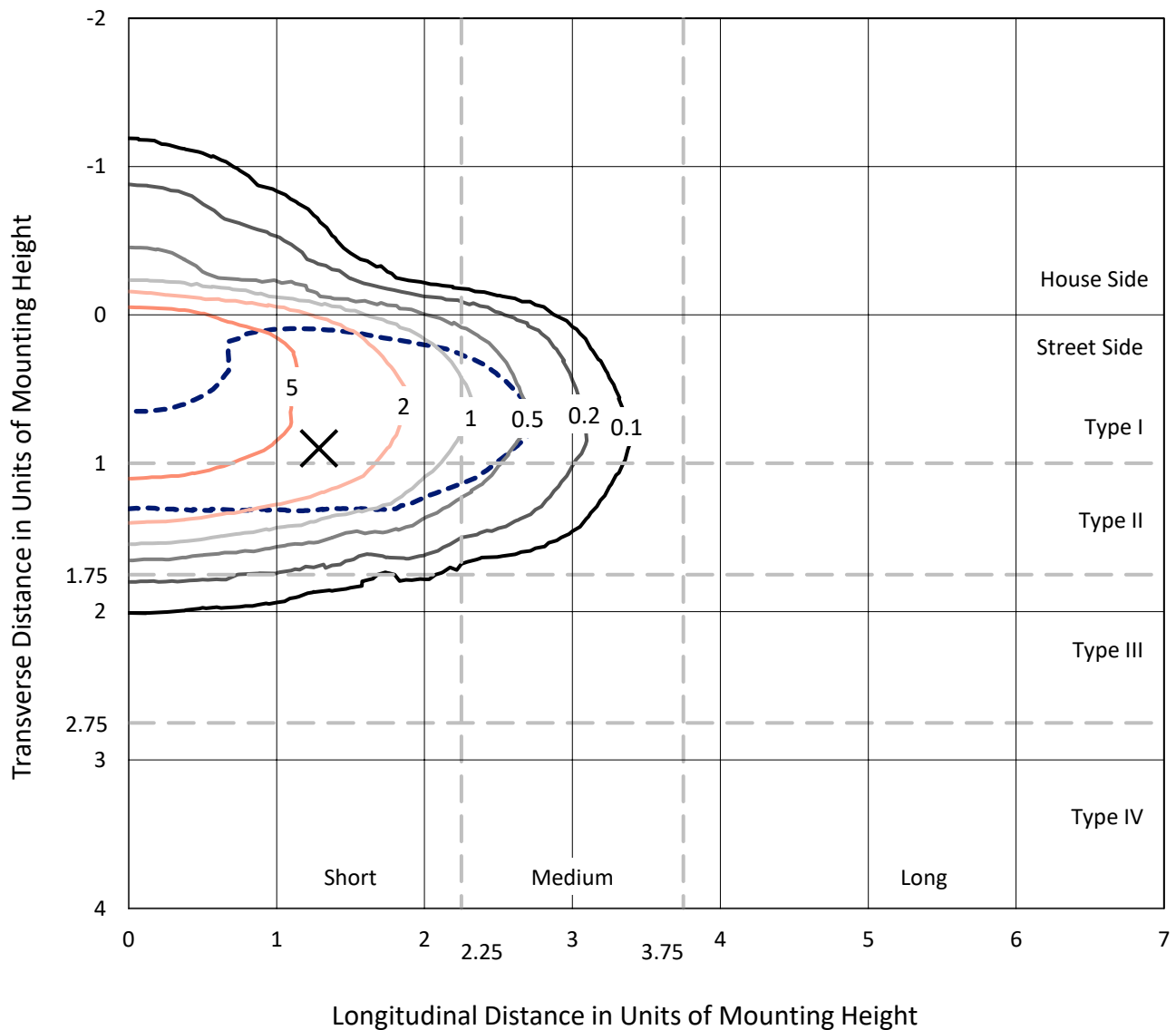


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

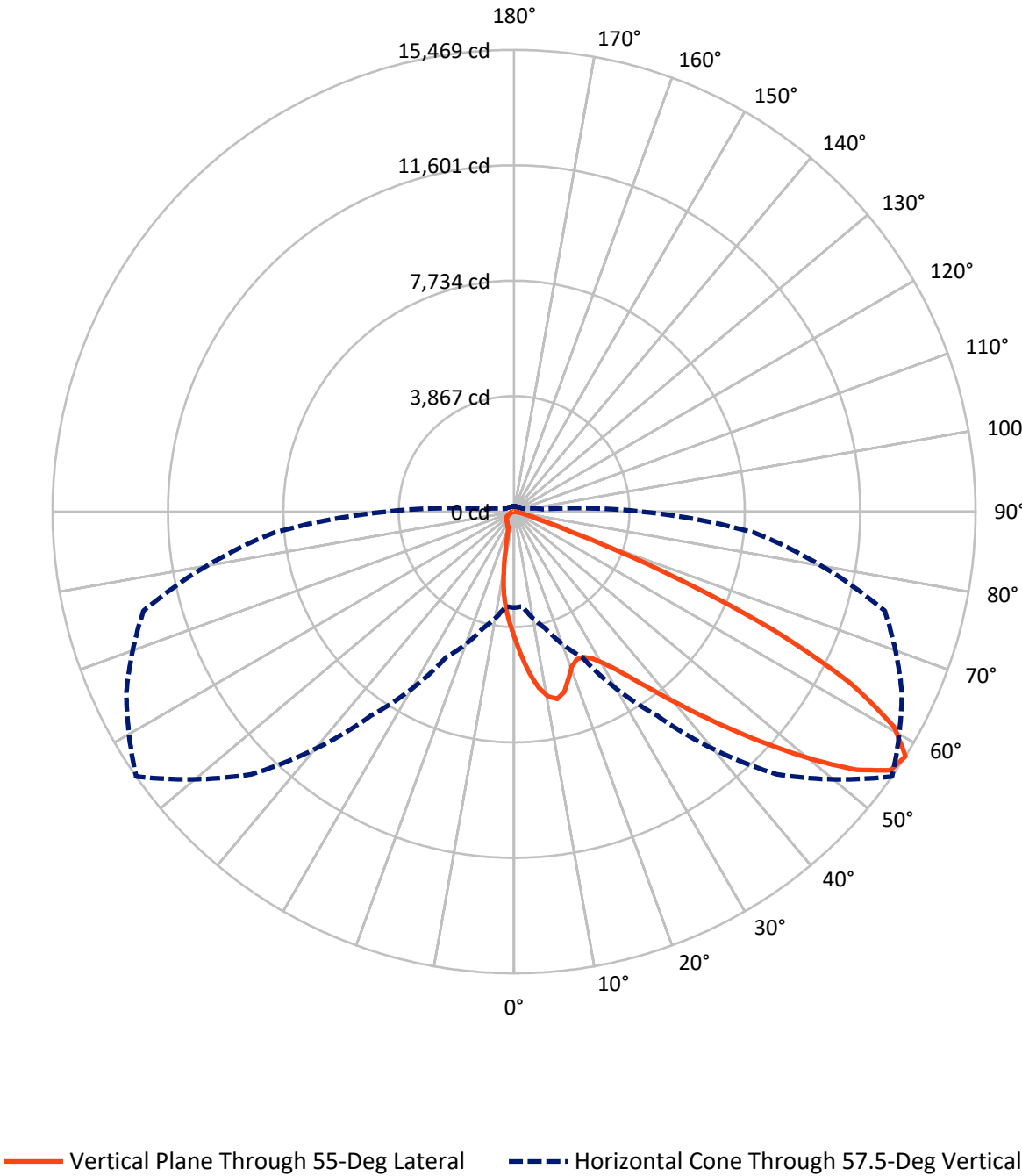


Based on 25 foot mounting height. Maximum calculated value = 9.8 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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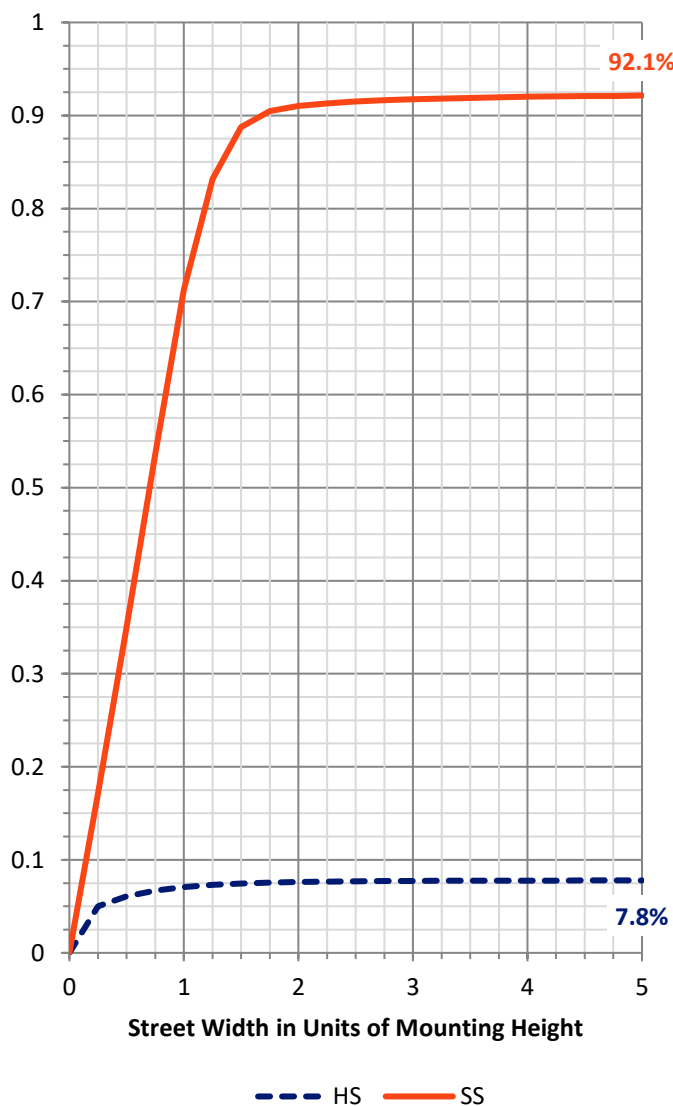
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1384.0	0.0	1384.0
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	16338.2	0.0	16338.2
	% Fixture	92.2	0.0	92.2
Total	Lumens	17722.3	0.0	17722.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.4	2.2
10°-20°	959.8	5.4
20°-30°	1535.7	8.7
30°-40°	2599.3	14.7
40°-50°	4267.4	24.1
50°-60°	4690.2	26.5
60°-70°	2690.3	15.2
70°-80°	549.7	3.1
80°-90°	32.4	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°	17722.3	100.0
0°-180°	17722.3	100.0

Coefficient of Utilization



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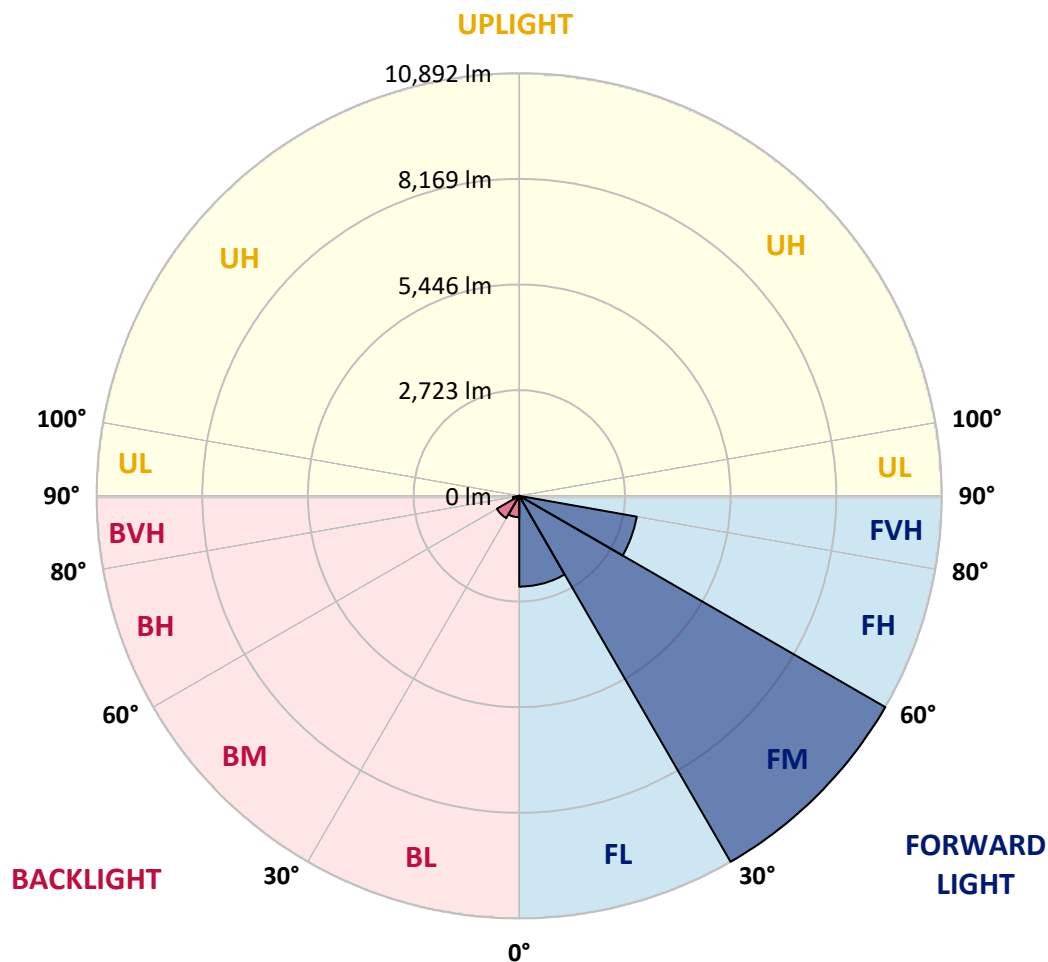
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2340.3	13.2			
FM	(30°-60°)	10892.2	61.5			
FH	(60°-80°)	3075.4	17.4			G2/5000
FVH	(80°-90°)	30.2	0.2			G1/100
BL	(0°-30°)	552.5	3.1	B2/1000		
BM	(30°-60°)	664.7	3.8	B1/1000		
BH	(60°-80°)	164.6	0.9	B1/500		G1/500
BVH	(80°-90°)	2.2	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-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7
2.5°	5298.9	5232.3	5222.5	5209.4	5082.6	4987.4	4849.8	4699.0	4529.6	4357.0	4280.5
5°	6121.8	6069.3	6059.5	5998.3	5854.1	5692.3	5447.6	5138.3	4822.5	4451.0	4291.4
7.5°	6281.4	6271.6	6316.4	6314.1	6294.4	6166.6	5960.1	5591.8	5117.5	4566.8	4319.8
10°	5570.0	5595.1	5728.4	5845.4	6161.2	6344.7	6300.0	5996.1	5421.3	4699.0	4351.5
12.5°	4921.9	4892.4	4987.4	5119.8	5486.9	6033.3	6440.9	6333.8	5768.8	4848.8	4398.5
15°	4515.4	4503.4	4556.9	4618.1	4897.9	5448.7	6277.0	6608.1	6103.3	5025.8	4469.5
17.5°	4385.4	4375.5	4391.9	4407.2	4588.6	5014.8	5886.9	6776.4	6423.5	5227.9	4548.2
20°	4491.3	4478.2	4476.1	4464.1	4539.4	4830.1	5533.9	6788.4	6710.8	5411.5	4616.0
22.5°	4800.6	4785.3	4731.8	4683.7	4690.3	4855.2	5376.5	6668.2	6927.2	5583.1	4658.5
25°	5361.3	5336.0	5224.6	5062.9	4960.2	5030.1	5400.5	6509.8	7133.7	5717.4	4637.8
27.5°	6062.8	6030.0	5886.9	5646.4	5411.5	5326.3	5574.4	6400.5	7305.3	5820.2	4593.0
30°	6750.1	6707.5	6566.6	6379.7	6036.5	5767.8	5887.9	6448.6	7509.7	5927.3	4534.0
32.5°	7492.1	7451.7	7264.9	7033.2	6749.1	6387.4	6317.4	6683.5	7759.9	6077.0	4492.5
35°	8430.8	8367.5	8101.9	7786.1	7484.6	7118.4	6898.8	7088.9	8093.2	6305.4	4515.4
37.5°	9499.6	9414.4	9128.0	8692.1	8298.6	7888.8	7606.9	7646.3	8581.7	6611.4	4586.5
40°	10507.2	10429.6	10165.1	9754.2	9260.3	8763.1	8462.6	8375.2	9256.0	6984.0	4711.0
42.5°	11111.5	11041.5	10930.1	10756.3	10340.0	9832.9	9453.8	9264.7	10053.7	7429.9	4862.9
45°	11145.3	11084.1	11233.9	11436.0	11354.1	11016.4	10554.2	10207.8	10854.6	7848.4	5020.2
47.5°	10603.3	10561.8	11016.4	11722.4	12074.2	12216.3	11790.2	11072.2	11515.9	8149.0	5084.7
50°	9125.9	9110.6	10046.0	11342.0	12348.5	13267.6	13093.9	11876.5	12028.4	8304.1	5023.5
52.5°	7912.9	7857.1	8402.4	10124.7	11949.7	13820.5	14368.0	12665.4	12386.8	8333.7	4880.4
55°	6001.6	5952.4	6636.6	8087.8	10663.5	13623.8	15300.2	13479.6	12643.6	8258.2	4623.6
57.5°	3219.3	3188.8	4053.2	5383.1	8335.8	12443.6	15468.5	14340.7	12860.0	8058.2	4264.1
60°	1253.5	1247.9	1571.4	2611.8	5066.2	10123.6	14619.4	14857.6	12995.5	7812.3	3963.6
62.5°	758.4	774.8	827.3	1172.6	2238.0	6289.0	12662.1	14269.6	13086.2	7587.3	3715.5
65°	627.3	628.3	634.9	805.3	1072.0	2631.5	9532.4	12335.5	12862.1	7186.2	3363.6
67.5°	537.6	547.5	572.7	639.3	756.2	1153.9	5488.0	9555.4	11499.5	6252.9	2815.1
70°	424.0	437.2	468.8	525.6	583.5	722.3	2028.3	6357.9	8785.0	4713.2	2128.7
72.5°	357.3	356.3	372.7	427.3	463.3	508.2	780.2	3562.5	5105.5	2250.1	1053.5
75°	276.4	287.4	308.2	357.3	379.1	368.3	422.9	1301.5	1829.3	681.9	358.4
77.5°	216.4	225.1	243.6	291.8	313.6	261.2	243.6	465.6	587.9	244.8	161.7
80°	97.3	104.9	166.2	215.2	255.7	180.3	132.2	238.2	261.2	111.4	82.0
82.5°	17.5	29.5	97.3	113.7	131.1	117.0	68.9	123.5	127.8	44.8	28.4
85°	1.1	2.2	33.9	41.5	52.5	38.2	20.8	49.2	42.6	15.3	11.0
87.5°	0.0	0.0	0.0	1.1	1.1	5.4	6.6	8.7	6.6	5.4	4.4
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7	4270.7
2.5°	4201.8	4046.6	3895.8	3772.3	3700.1	3577.8	3496.9	3483.8	3449.9	3479.5
5°	4120.9	3843.3	3562.5	3311.2	3104.6	2838.0	2639.1	2554.9	2481.7	2506.8
7.5°	4082.7	3644.5	3207.3	2777.9	2336.4	1910.2	1593.3	1461.0	1360.5	1374.7
10°	4031.3	3438.0	2752.7	2097.0	1505.8	1085.2	866.5	785.8	740.9	742.0
12.5°	3992.0	3190.9	2225.0	1421.7	916.9	692.8	625.0	605.4	592.2	593.4
15°	3972.3	2900.2	1703.7	947.4	655.7	586.8	570.4	561.7	553.0	551.9
17.5°	3939.5	2576.8	1246.9	691.8	573.7	549.7	535.5	525.6	514.8	512.5
20°	3890.3	2209.6	911.4	584.7	537.6	519.1	499.4	486.3	473.1	471.0
22.5°	3799.7	1821.7	700.5	540.9	511.5	490.7	466.6	451.3	438.2	436.0
25°	3631.4	1457.8	590.1	513.6	488.5	463.3	437.2	416.4	404.4	402.1
27.5°	3418.3	1145.2	535.5	488.5	459.0	436.0	406.5	386.8	376.0	373.7
30°	3166.9	881.9	503.8	460.0	424.0	404.4	378.1	361.7	355.2	355.2
32.5°	2895.9	704.9	490.7	431.6	393.4	371.6	350.8	344.2	342.0	340.9
35°	2641.3	611.9	484.1	408.7	366.1	345.3	336.6	337.6	342.0	342.0
37.5°	2415.1	582.5	480.8	392.3	342.0	323.5	328.9	338.8	334.4	334.4
40°	2210.7	585.7	478.7	380.3	322.4	311.4	322.4	314.7	303.8	302.7
42.5°	2054.4	613.1	474.3	370.4	310.4	302.7	298.4	286.3	285.3	287.4
45°	1940.8	637.1	473.1	366.1	297.2	283.0	277.6	265.6	287.4	292.8
47.5°	1806.4	637.1	473.1	350.8	275.4	269.9	261.2	248.0	269.9	275.4
50°	1632.6	596.7	454.6	333.3	257.9	254.6	239.3	222.9	218.5	221.8
52.5°	1413.0	523.5	407.6	309.2	240.5	233.9	215.2	203.3	200.0	200.0
55°	1162.8	438.2	344.2	274.3	221.8	209.8	196.7	191.3	188.0	185.7
57.5°	945.3	359.6	276.4	243.6	204.4	189.0	184.7	178.1	172.6	169.4
60°	775.9	283.0	228.4	216.4	186.9	172.6	171.6	162.9	148.6	146.5
62.5°	598.8	207.7	192.3	188.0	169.4	157.3	155.2	137.7	115.8	111.4
65°	422.9	161.7	155.2	165.0	150.8	139.9	134.4	108.1	85.3	82.0
67.5°	297.2	135.5	122.4	144.2	131.1	117.0	113.7	91.8	71.0	68.9
70°	212.0	110.4	100.6	123.5	104.9	102.7	96.1	76.5	57.9	55.8
72.5°	149.8	84.2	77.6	107.1	72.2	88.6	78.7	59.0	43.7	41.5
75°	110.4	60.1	54.6	62.3	52.5	66.6	55.8	39.4	27.4	26.2
77.5°	80.9	38.2	32.8	30.6	30.6	41.5	30.6	16.4	12.0	11.0
80°	56.8	17.5	15.3	13.1	12.0	9.8	4.4	2.2	1.1	1.1
82.5°	33.9	7.7	7.7	5.4	3.3	0.0	0.0	0.0	0.0	0.0
85°	7.7	3.3	3.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.1	1.1	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)