

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: P966335

Luminaire Tested: **NAV-SB4B-835-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966335
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-835-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 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: 18166 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

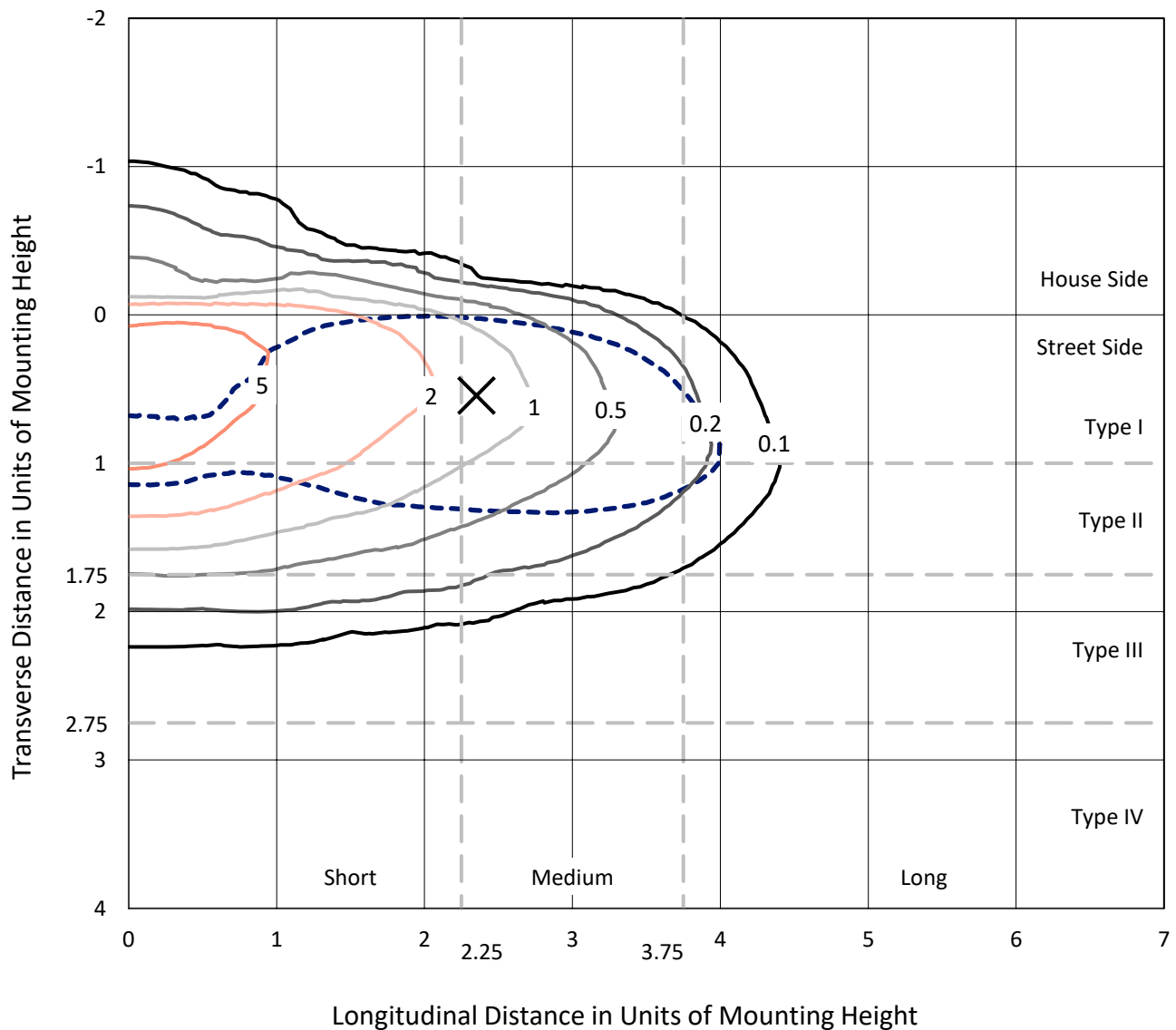
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

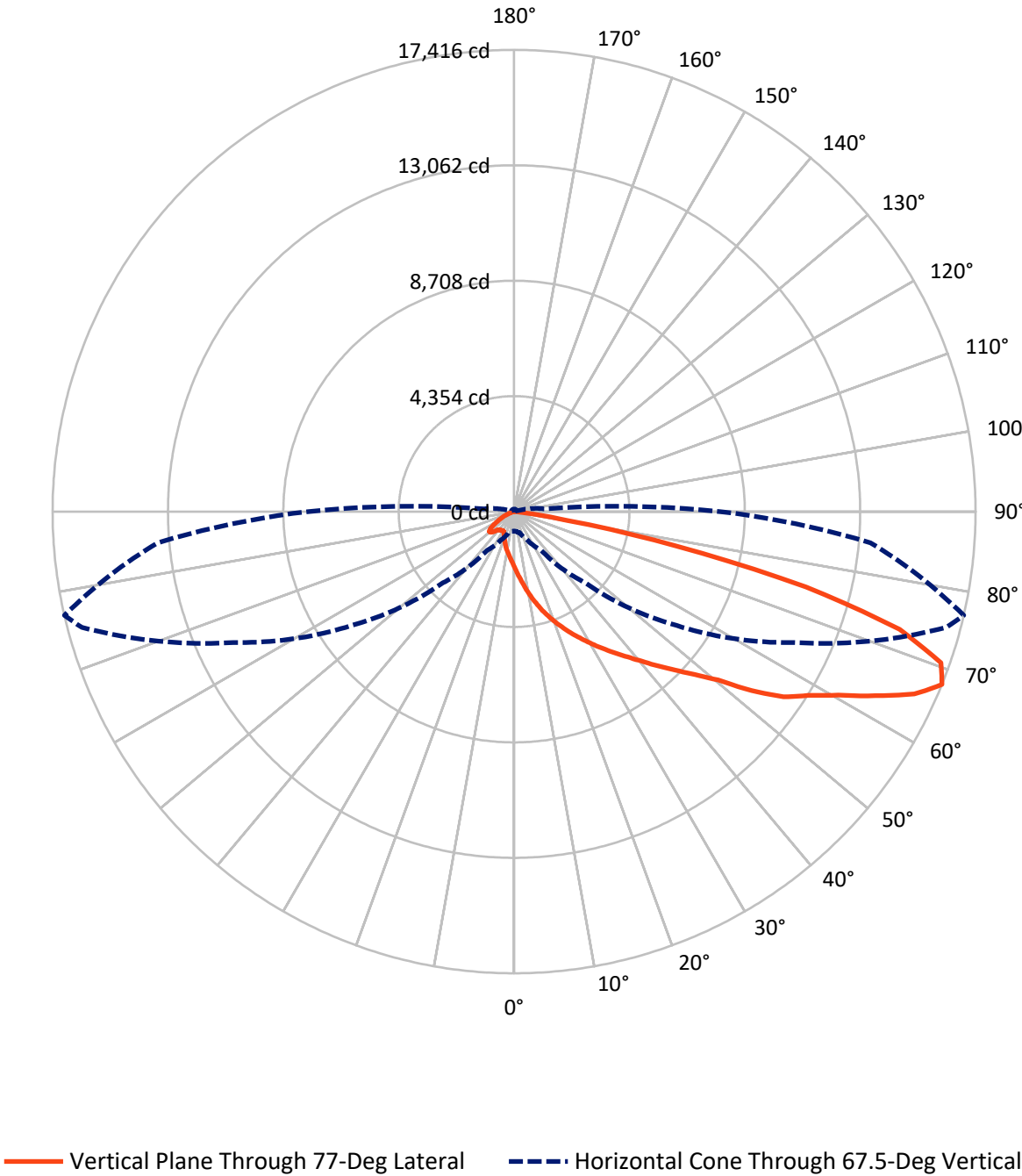
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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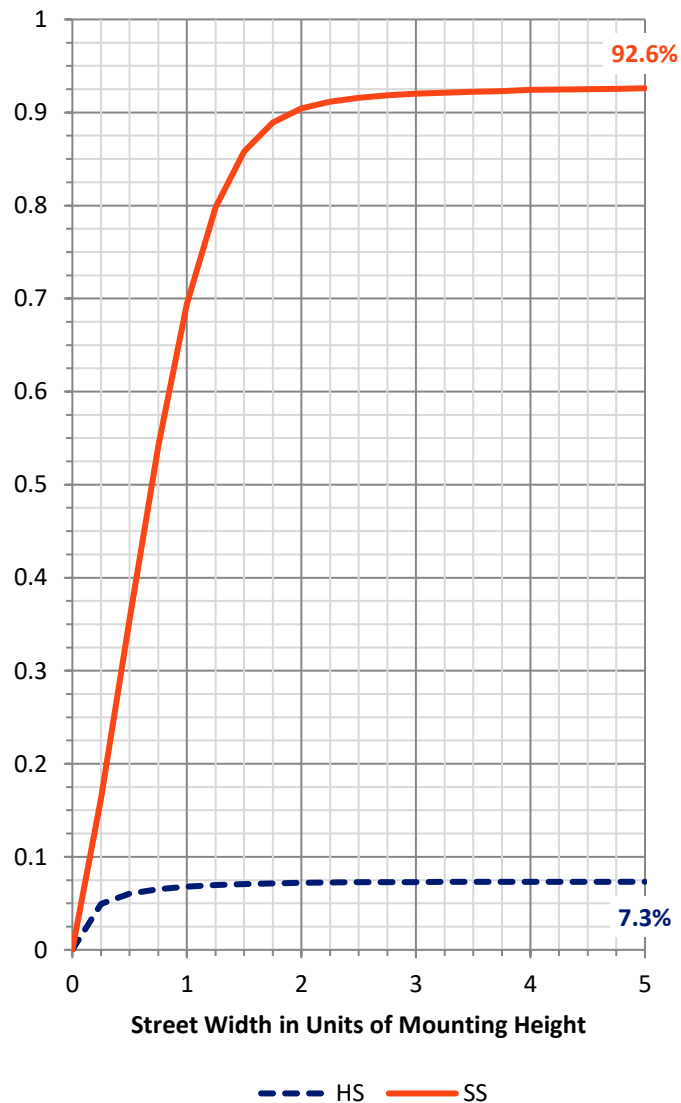
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1336.5	0.0	1336.5
	% Fixture	7.4	0.0	7.4
Street Side	Lumens	16829.6	0.0	16829.6
	% Fixture	92.6	0.0	92.6
Total	Lumens	18166.0	0.0	18166.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.8	1.2
10°-20°	748.7	4.1
20°-30°	1444.9	8.0
30°-40°	2508.4	13.8
40°-50°	3642.0	20.0
50°-60°	4182.4	23.0
60°-70°	3631.1	20.0
70°-80°	1710.3	9.4
80°-90°	84.6	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°	18166.0	100.0
0°-180°	18166.0	100.0

Coefficient of Utilization



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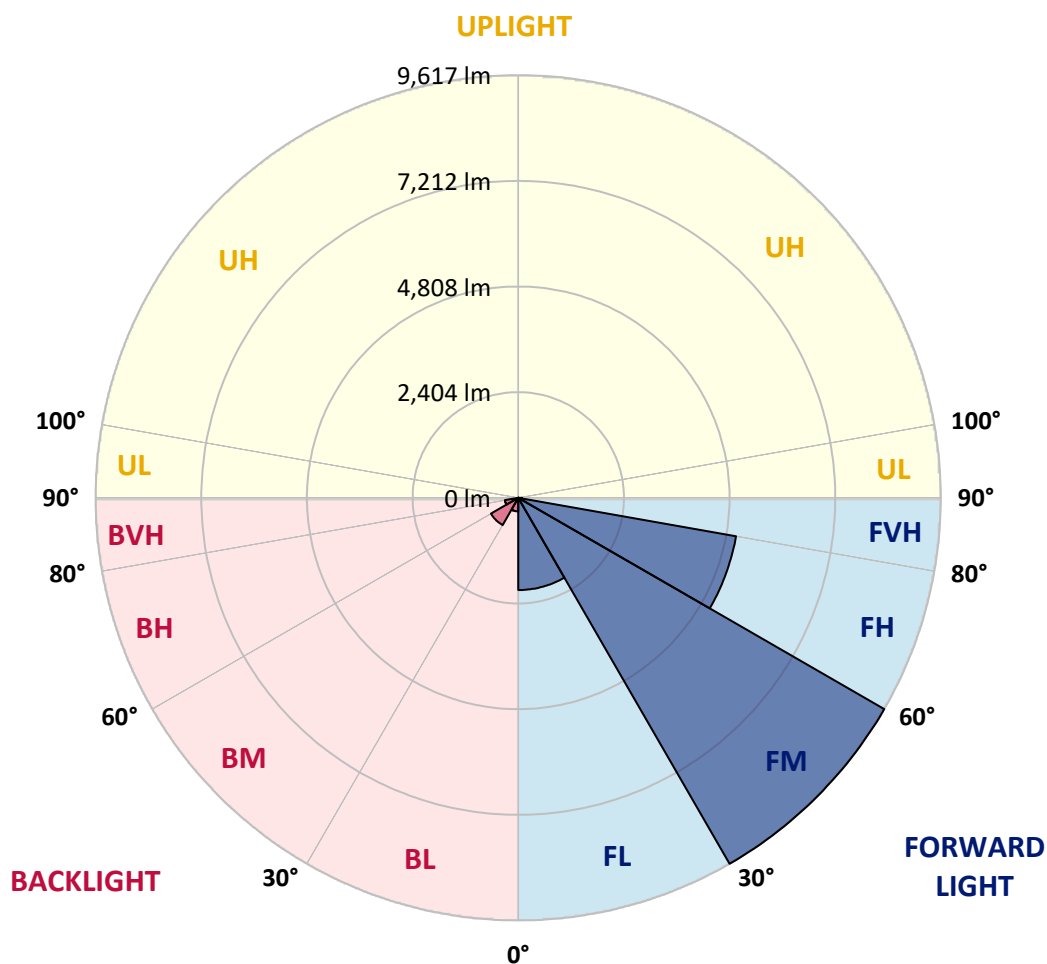
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2098.0	11.5			
FM	(30°-60°)	9616.6	52.9			
FH	(60°-80°)	5031.9	27.7			G3/7500
FVH	(80°-90°)	83.0	0.5			G1/100
BL	(0°-30°)	309.4	1.7	B1/500		
BM	(30°-60°)	716.1	3.9	B1/1000		
BH	(60°-80°)	309.4	1.7	B1/500		G1/500
BVH	(80°-90°)	1.6	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°	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8
2.5°	2900.2	2918.3	2892.3	2842.7	2768.3	2719.7	2601.3	2489.6	2365.6	2326.0	2202.0
5°	3535.3	3551.1	3521.8	3467.7	3368.4	3273.6	3117.9	2884.5	2641.9	2564.1	2344.1
7.5°	4005.8	4014.8	4003.5	3953.8	3859.1	3751.9	3578.2	3301.8	2942.0	2856.3	2518.9
10°	4344.2	4373.5	4370.1	4350.9	4287.8	4201.0	4016.0	3701.2	3278.2	3167.6	2716.4
12.5°	4568.6	4601.3	4620.6	4663.4	4660.1	4604.7	4442.3	4109.5	3613.2	3483.5	2938.6
15°	4634.1	4669.1	4742.4	4841.7	4929.6	4957.8	4843.9	4510.0	3982.0	3816.3	3166.4
17.5°	4596.8	4651.0	4739.0	4895.8	5088.7	5216.1	5203.7	4896.9	4317.1	4127.6	3389.9
20°	4679.2	4731.1	4799.9	4931.9	5156.4	5387.6	5480.2	5267.0	4649.9	4451.4	3624.5
22.5°	5134.9	5125.9	5132.7	5154.1	5288.4	5517.4	5708.0	5603.1	4979.2	4776.2	3872.7
25°	5857.0	5816.3	5747.5	5631.2	5597.4	5708.0	5906.6	5900.9	5326.7	5109.0	4126.4
27.5°	6684.9	6678.2	6516.8	6237.0	6079.2	6036.2	6131.0	6190.8	5670.8	5438.4	4381.4
30°	7477.9	7496.0	7278.3	6966.9	6677.1	6509.0	6423.2	6466.1	6020.4	5793.7	4644.3
32.5°	8168.3	8187.5	7950.6	7586.2	7227.5	7024.4	6843.9	6737.9	6401.7	6154.7	4933.0
35°	8751.6	8770.7	8498.8	8096.2	7713.7	7529.9	7325.7	7035.7	6785.3	6555.2	5254.6
37.5°	9272.7	9267.0	8902.6	8496.5	8121.0	7975.4	7868.2	7402.3	7180.1	6957.9	5611.0
40°	9580.7	9604.4	9293.0	8845.1	8480.7	8374.8	8368.0	7856.9	7635.8	7420.4	6001.3
42.5°	9670.9	9712.6	9487.0	9119.3	8788.8	8673.7	8850.8	8348.8	8166.1	7956.3	6442.3
45°	9508.4	9549.1	9446.4	9191.5	8998.6	8924.2	9265.9	8858.7	8732.4	8524.8	6939.9
47.5°	9034.7	9085.4	9110.2	9056.1	9053.8	9129.5	9638.2	9395.7	9404.7	9192.6	7516.3
50°	8117.6	8203.3	8431.1	8622.9	8919.7	9291.8	10000.3	9977.8	10162.8	9980.0	8267.5
52.5°	6450.2	6572.1	7357.2	7881.7	8548.5	9261.4	10398.5	10911.7	11492.7	11225.4	9326.9
55°	5183.4	5183.4	5821.9	6803.3	7824.2	9060.6	10572.3	11518.6	12398.6	12335.4	10072.5
57.5°	4225.8	4276.5	4683.7	5551.2	6776.3	8582.3	10679.4	11899.9	13128.4	13082.2	10801.2
60°	2608.1	2717.5	3486.8	4343.0	5583.9	7730.7	10611.7	12285.8	14013.9	14051.2	11678.8
62.5°	1468.7	1509.3	1852.3	3124.7	4341.9	6585.6	10093.9	12501.2	15146.5	15304.5	12583.5
65°	1014.1	1034.4	1166.4	1944.7	3009.7	5243.3	9082.0	12366.9	16281.3	16600.6	13350.6
67.5°	736.7	746.8	829.1	1187.9	1785.8	3801.6	7496.0	11690.1	16882.6	17416.2	13497.3
70°	566.3	573.1	632.8	780.6	1054.7	2346.3	5444.1	10344.3	16447.1	17084.5	12746.0
72.5°	460.2	467.0	513.3	577.6	699.4	1387.5	3299.6	8400.7	14525.0	15213.0	10850.9
75°	388.1	397.1	438.8	480.5	548.3	891.1	1547.7	5850.2	10923.0	11374.3	7545.6
77.5°	215.5	198.5	356.5	398.2	462.5	564.1	724.3	3442.9	6117.5	6242.7	3348.1
80°	134.3	138.8	283.1	320.4	355.4	284.2	331.7	1325.4	2120.7	2014.7	648.6
82.5°	7.9	18.0	217.7	231.2	243.6	121.9	125.3	450.1	511.0	469.2	115.1
85°	0.0	0.0	99.2	80.1	84.6	35.0	36.1	105.0	68.8	74.4	22.5
87.5°	0.0	0.0	0.0	2.3	0.0	3.4	6.8	9.0	3.4	4.5	7.9
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°	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8	2094.8
2.5°	2123.0	2044.1	1883.8	1727.0	1599.6	1481.1	1396.6	1316.4	1275.8	1273.6	1271.3
5°	2187.4	2021.5	1701.1	1418.0	1190.1	1007.4	888.9	804.3	761.5	746.8	744.6
7.5°	2277.5	2028.3	1541.0	1147.3	878.7	722.0	654.3	627.2	618.2	608.0	605.8
10°	2391.5	2044.1	1397.7	923.9	692.6	613.7	586.6	575.3	568.6	561.8	559.5
12.5°	2518.9	2058.7	1255.5	767.1	609.2	568.6	549.4	535.9	526.8	519.0	516.7
15°	2643.1	2067.7	1107.7	657.6	566.3	533.6	513.3	498.6	486.2	477.1	476.0
17.5°	2766.1	2080.1	969.0	592.2	531.4	498.6	478.3	460.2	450.1	439.9	438.8
20°	2902.5	2077.9	838.1	546.0	496.3	463.6	442.2	425.3	415.1	403.8	402.7
22.5°	3028.9	2066.6	723.1	506.5	460.2	428.7	405.0	388.1	377.9	368.9	367.8
25°	3174.3	2057.6	627.2	470.4	426.4	394.8	368.9	353.1	341.8	333.9	332.8
27.5°	3314.2	2044.1	557.3	437.7	393.7	363.3	338.5	320.4	310.3	304.5	304.5
30°	3451.9	2040.7	531.4	406.1	364.4	333.9	309.1	292.1	284.2	282.0	280.8
32.5°	3617.7	2049.7	542.6	394.8	337.3	306.8	283.1	270.7	262.8	262.8	262.8
35°	3794.9	2047.4	559.5	405.0	319.3	279.7	261.7	253.8	245.9	245.9	245.9
37.5°	4017.1	2050.8	573.1	421.9	312.5	257.2	247.0	236.9	232.4	232.4	232.4
40°	4348.7	2162.5	566.3	436.5	310.3	241.4	221.1	217.7	214.3	214.3	214.3
42.5°	4754.8	2405.1	575.3	437.7	309.1	230.1	203.1	209.8	201.9	200.8	199.7
45°	5199.2	2670.1	632.8	414.0	308.0	224.5	194.0	201.9	189.5	189.5	189.5
47.5°	5640.4	2932.9	691.5	380.2	304.5	223.3	186.1	181.6	178.2	179.4	179.4
50°	6248.3	3147.3	714.0	333.9	296.6	221.1	171.5	172.6	170.4	172.6	172.6
52.5°	6910.6	3192.5	687.0	282.0	274.1	214.3	161.3	165.8	164.7	167.0	167.0
55°	7323.4	3143.9	567.4	234.6	239.1	187.3	151.2	160.2	160.2	160.2	160.2
57.5°	7749.8	2937.4	402.7	190.6	198.5	153.4	142.2	154.6	153.4	152.3	152.3
60°	8056.6	2603.6	265.1	156.8	158.0	126.4	132.0	145.5	144.4	138.8	138.8
62.5°	8285.6	2234.7	170.4	133.1	120.7	114.0	120.7	132.0	127.5	115.1	112.9
65°	8259.7	1723.6	130.9	114.0	99.2	99.2	105.0	115.1	101.5	81.2	78.9
67.5°	7778.0	1166.4	108.3	95.8	83.4	82.3	86.8	95.8	86.8	68.8	66.5
70°	6917.3	762.6	86.8	74.4	66.5	60.9	69.9	82.3	73.3	55.2	53.0
72.5°	5614.3	464.7	65.4	54.1	48.5	39.5	55.2	67.6	58.6	40.6	38.3
75°	3632.4	236.9	45.1	35.0	25.9	23.7	40.6	50.7	40.6	24.8	21.4
77.5°	1389.8	99.2	24.8	15.8	13.5	11.3	22.5	30.4	16.9	5.6	4.5
80°	267.3	41.7	12.4	7.9	6.8	4.5	3.4	2.3	0.0	0.0	0.0
82.5°	46.2	13.5	4.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	15.8	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.6	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)