

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: P967205

Luminaire Tested: **NAV-SB4D-735-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967205
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-735-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31947.2 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 293.6
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



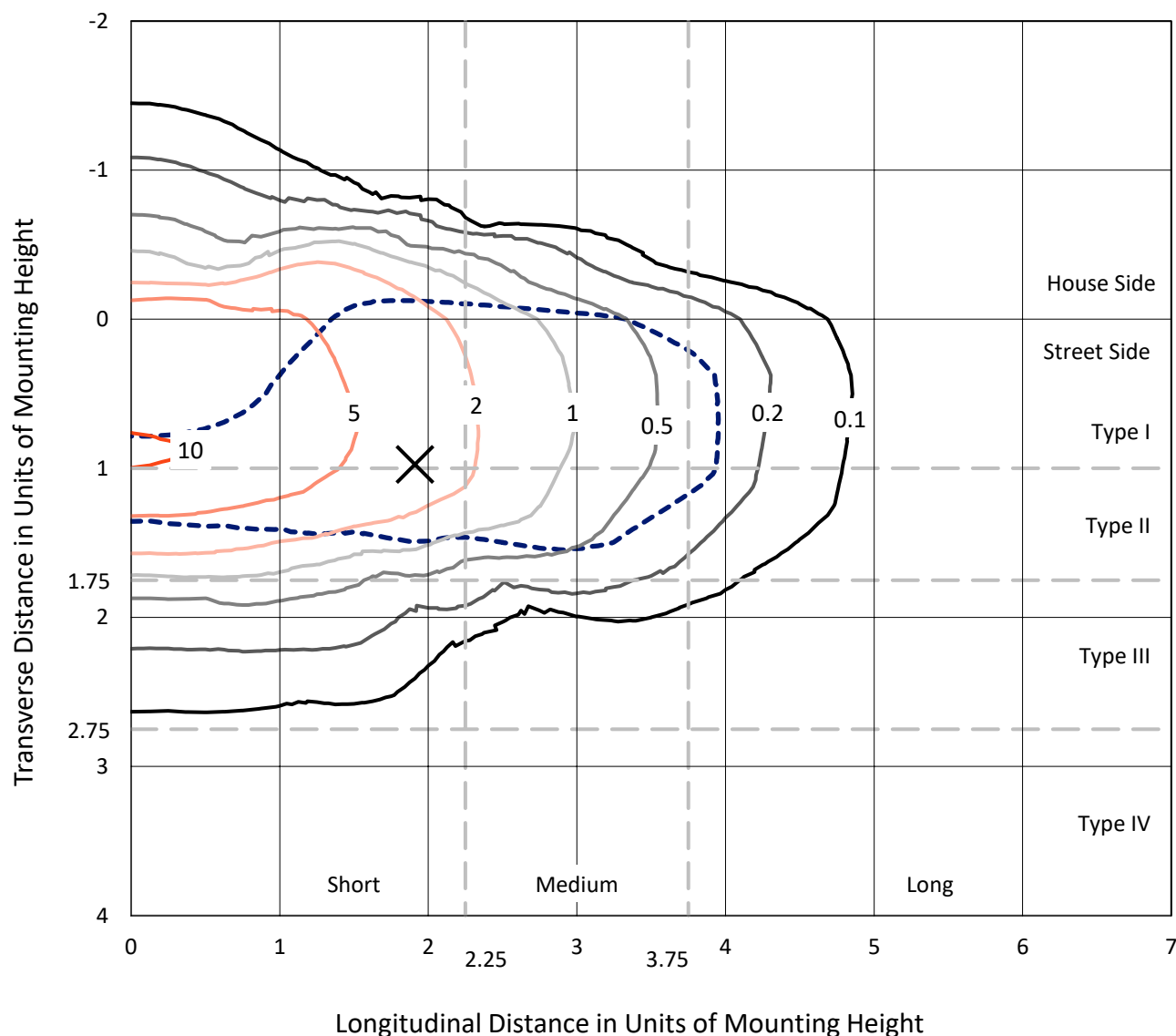
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

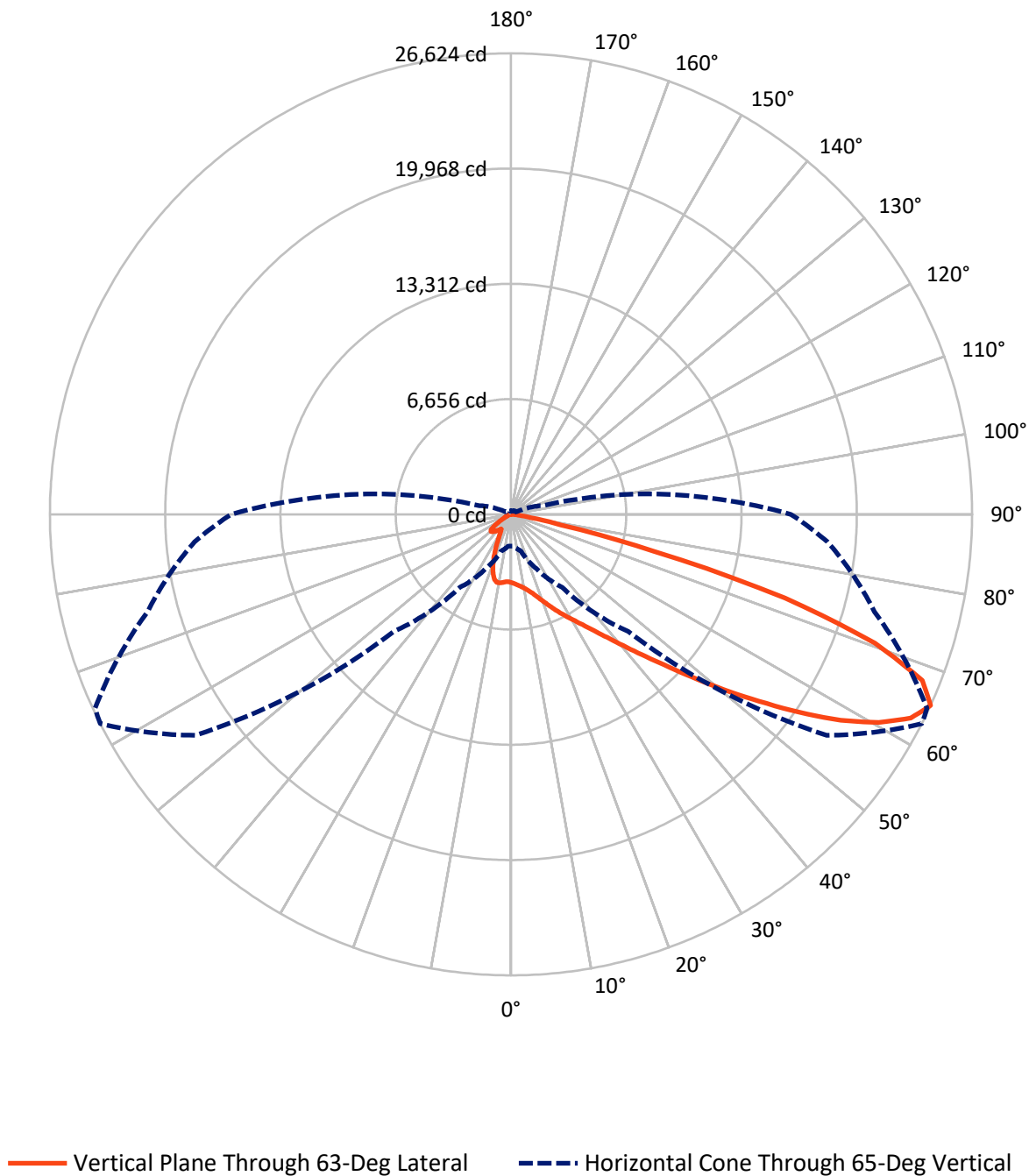


Based on 25 foot mounting height. Maximum calculated value = 10.8 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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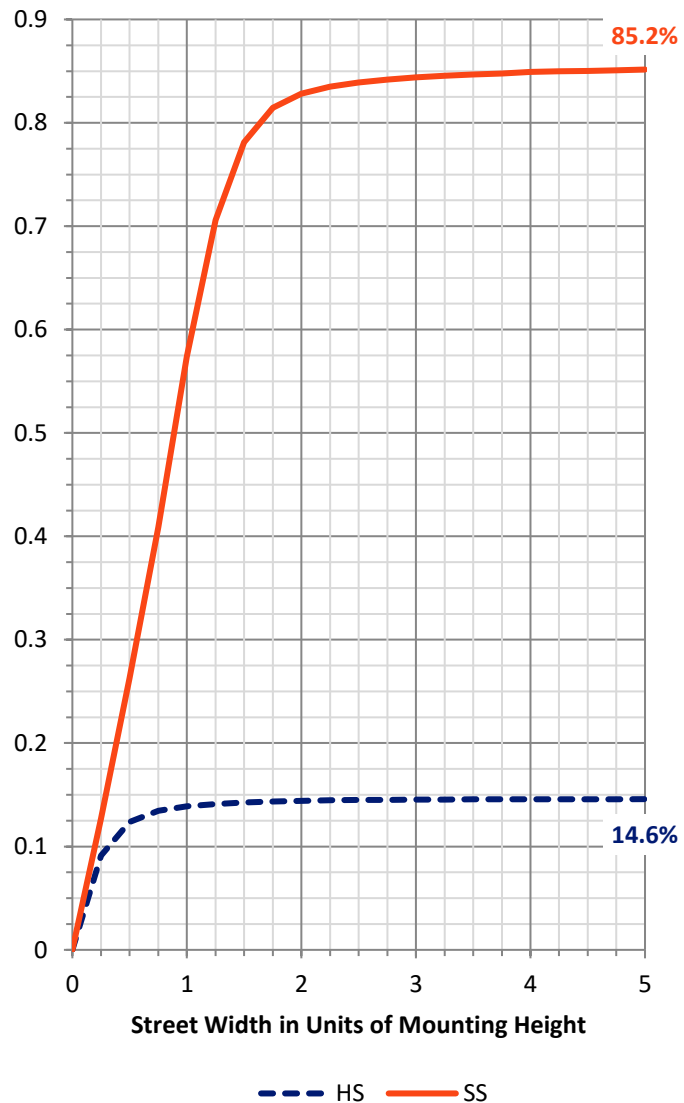
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4696.0	0.0	4696.0
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	27251.2	0.0	27251.2
	% Fixture	85.3	0.0	85.3
Total	Lumens	31947.2	0.0	31947.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.5	1.2
10°-20°	1030.8	3.2
20°-30°	1794.8	5.6
30°-40°	3235.0	10.1
40°-50°	6416.0	20.1
50°-60°	8739.6	27.4
60°-70°	6975.9	21.8
70°-80°	3156.8	9.9
80°-90°	226.9	0.7
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°	31947.2	100.0
0°-180°	31947.2	100.0

Coefficient of Utilization



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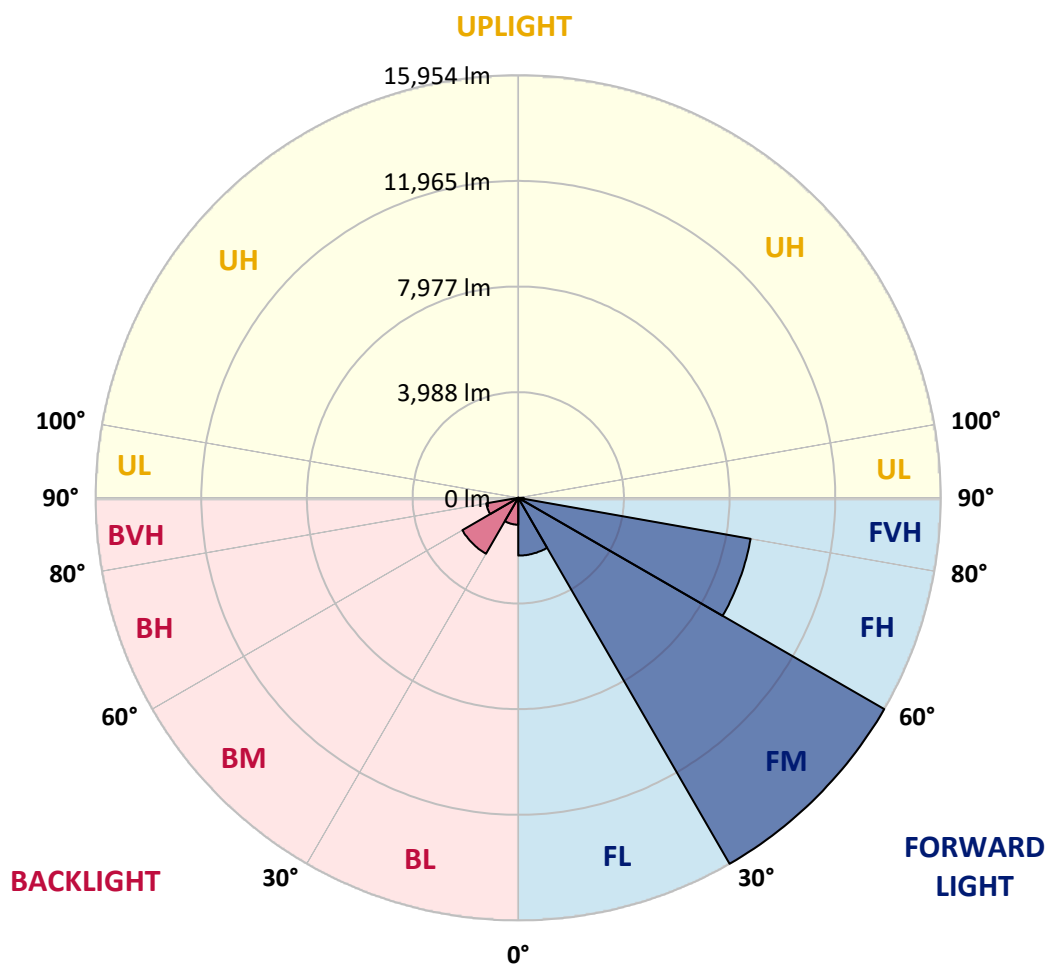
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2180.8	6.8			
FM	(30°-60°)	15953.6	49.9			
FH	(60°-80°)	8906.7	27.9			G4/12000
FVH	(80°-90°)	210.1	0.7			G2/225
BL	(0°-30°)	1016.3	3.2	B3/2500		
BM	(30°-60°)	2436.9	7.6	B2/2500		
BH	(60°-80°)	1225.9	3.8	B3/2500		G3/2500
BVH	(80°-90°)	16.8	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9
2.5°	4035.2	4024.3	4039.6	4033.0	4028.6	4019.8	4015.4	4011.0	4002.2	3995.7	3969.3
5°	4046.2	4039.6	4055.0	4068.1	4081.3	4094.6	4101.1	4109.9	4101.1	4083.5	4057.2
7.5°	3953.8	3949.5	3982.4	4022.0	4081.3	4131.9	4186.8	4217.6	4219.8	4213.3	4184.7
10°	3947.3	3936.3	3969.3	4017.6	4094.6	4184.7	4281.3	4347.3	4356.0	4384.6	4353.9
12.5°	4050.6	4039.6	4085.8	4138.5	4217.6	4312.1	4430.8	4523.1	4536.3	4575.9	4553.9
15°	4224.2	4208.9	4261.5	4329.7	4430.8	4538.5	4663.8	4747.3	4758.3	4806.6	4767.1
17.5°	4426.4	4411.0	4472.6	4545.1	4654.9	4802.2	4947.3	5039.6	5052.7	5083.6	5011.0
20°	4685.8	4666.0	4714.3	4780.3	4896.7	5072.5	5246.2	5378.1	5375.8	5375.8	5257.2
22.5°	4986.8	4956.1	4997.8	5050.6	5160.5	5373.7	5604.4	5760.5	5760.5	5698.9	5503.3
25°	5309.9	5279.2	5325.3	5373.7	5470.3	5712.1	5982.5	6175.8	6184.6	6079.2	5767.1
27.5°	5714.4	5674.8	5710.0	5767.1	5824.3	6070.4	6391.3	6615.5	6619.9	6457.2	6017.7
30°	6492.3	6380.3	6270.3	6208.8	6235.2	6479.1	6822.0	7070.3	7092.4	6868.2	6290.1
32.5°	7916.6	7894.6	7507.7	7002.3	6738.6	6918.7	7303.3	7602.2	7615.4	7327.5	6644.0
35°	10129.8	10103.4	9481.4	8518.8	7659.4	7507.7	7888.0	8241.8	8233.0	7907.8	7103.4
37.5°	12771.5	12747.3	11927.5	10639.6	9248.5	8397.8	8641.8	9013.2	9068.2	8641.8	7696.7
40°	15028.7	14938.6	14419.9	13178.1	11358.3	9874.8	9714.3	9960.5	10017.6	9512.2	8450.6
42.5°	16738.6	16661.7	16397.9	15622.1	13912.2	12059.4	10978.1	11072.7	11136.3	10529.7	9316.5
45°	17624.4	17606.7	17712.2	17639.7	16514.4	14740.7	12784.7	12391.3	12415.5	11657.2	10299.0
47.5°	17749.6	17740.8	18222.1	18903.5	18751.8	17765.0	15103.4	14035.3	13949.5	12929.8	11367.1
50°	17011.1	16993.6	17916.6	19193.5	20246.3	20305.7	17736.4	15888.0	15699.0	14246.3	12481.4
52.5°	14652.9	14648.5	16165.0	18290.2	20771.6	22529.8	20338.7	17923.3	17606.7	15639.7	13659.5
55°	11274.8	11356.2	13094.6	15606.8	19813.4	23600.2	22674.9	20182.6	19696.8	17041.9	14745.1
57.5°	7986.9	8105.6	9824.2	12061.6	16841.9	22967.2	24255.1	22446.4	21923.2	18439.8	15846.3
60°	4290.1	4395.6	6116.5	8786.9	12529.8	20606.8	25088.1	24411.2	23916.6	19767.2	16839.7
62.5°	2556.0	2591.2	3303.4	5672.6	8474.8	15743.0	24734.3	25907.9	25501.3	20881.5	17703.4
65°	1835.2	1841.8	2200.1	3463.8	5145.1	9564.9	22253.0	26624.4	26499.1	21721.1	18343.0
67.5°	1545.1	1540.7	1690.1	2301.1	3505.5	4791.3	17055.1	25611.2	26143.0	22253.0	18705.6
70°	1325.3	1331.9	1507.7	1685.7	2635.2	2712.1	8479.2	22299.1	23433.1	22393.6	18683.7
72.5°	986.9	1008.8	1171.5	1536.3	1989.0	1865.9	2927.5	16534.2	18584.8	21099.1	17714.5
75°	696.7	707.7	824.2	1292.3	1483.5	1358.2	1494.6	8547.3	11175.9	16175.9	14499.0
77.5°	536.3	556.1	624.2	903.3	1461.5	953.9	914.3	2958.3	4545.1	9771.5	9940.8
80°	290.1	325.2	450.6	652.7	1026.3	674.8	452.7	1178.0	1540.7	4569.2	3833.0
82.5°	149.4	167.1	314.3	470.4	584.7	589.0	224.2	490.2	635.2	1411.0	525.3
85°	59.3	72.6	210.9	259.3	301.1	290.1	101.1	197.8	228.6	391.2	160.4
87.5°	13.2	21.9	76.9	59.3	57.1	61.5	24.2	46.1	44.0	46.1	28.6
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°	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9	3942.9
2.5°	3967.1	3958.2	3934.1	3907.7	3877.0	3859.3	3848.4	3846.2	3830.8	3819.8	3830.8
5°	4033.0	4024.3	3978.0	3923.1	3863.7	3817.6	3773.6	3734.1	3677.0	3665.9	3661.6
7.5°	4164.9	4140.7	4066.0	3991.2	3879.1	3745.0	3582.5	3395.6	3228.6	3178.0	3153.8
10°	4327.5	4294.5	4200.0	4068.1	3819.8	3455.0	3061.6	2696.8	2406.6	2325.3	2294.6
12.5°	4512.2	4483.6	4358.3	4114.3	3571.4	2909.9	2307.7	1854.9	1573.7	1503.3	1483.5
15°	4731.9	4690.2	4516.6	4044.0	3127.5	2211.0	1584.6	1316.5	1215.4	1202.2	1189.0
17.5°	4964.9	4896.7	4657.2	3791.3	2529.7	1571.4	1224.2	1147.3	1103.3	1090.1	1083.5
20°	5178.1	5090.2	4740.7	3408.8	1890.1	1224.2	1096.8	1046.1	1006.7	991.2	982.5
22.5°	5391.3	5265.9	4740.7	2887.9	1417.6	1085.7	1006.7	960.4	914.3	894.5	883.6
25°	5613.2	5446.2	4657.2	2307.7	1140.6	995.6	920.9	870.3	830.8	806.6	797.8
27.5°	5828.7	5597.8	4465.9	1758.3	1015.4	916.5	841.7	793.5	756.0	738.5	738.5
30°	6033.0	5747.3	4197.8	1334.0	934.1	839.6	769.3	727.4	690.1	672.5	674.8
32.5°	6309.9	5936.3	3912.1	1094.5	863.8	767.0	703.3	663.8	630.8	617.6	617.6
35°	6694.6	6215.4	3665.9	1074.7	804.4	707.7	644.0	606.6	573.6	562.6	562.6
37.5°	7239.6	6666.0	3536.2	1206.6	756.0	655.0	595.6	556.1	525.3	516.5	514.2
40°	7912.2	7277.0	3606.7	1338.4	723.0	608.7	551.7	512.1	485.7	474.8	472.5
42.5°	8709.9	8030.9	3995.7	1439.6	701.1	569.3	509.9	466.0	448.3	443.9	443.9
45°	9626.5	8859.4	4591.3	1547.2	665.9	531.9	468.1	435.2	422.0	419.7	417.6
47.5°	10668.2	9769.3	5281.3	1681.3	630.8	496.7	435.2	413.2	402.2	397.8	397.8
50°	11701.2	10685.8	5991.2	1756.0	602.2	463.7	408.8	391.2	382.4	380.2	380.2
52.5°	12782.5	11628.6	6564.9	1685.7	578.0	437.4	386.8	373.6	364.8	362.6	362.6
55°	13813.3	12391.3	6663.8	1430.8	529.7	411.0	362.6	356.1	345.0	345.0	342.9
57.5°	14701.2	12773.8	5964.9	1050.5	481.3	371.5	338.5	331.9	323.1	320.9	318.7
60°	15516.7	12663.9	4604.4	707.7	428.6	331.9	307.7	303.3	294.5	283.5	281.4
62.5°	15976.0	12180.3	3149.5	461.6	375.9	290.1	272.5	270.3	250.5	228.6	224.2
65°	16149.6	11186.8	1964.8	336.3	314.3	248.4	235.1	230.7	202.2	178.0	175.8
67.5°	15997.9	9551.8	991.2	265.9	248.4	206.6	193.4	193.4	173.6	151.7	149.4
70°	15391.3	7160.4	417.6	213.2	191.2	158.3	158.3	167.1	147.3	123.1	120.8
72.5°	14074.8	4817.6	222.0	162.7	142.9	112.1	129.7	136.2	116.4	92.4	92.4
75°	11189.1	2938.5	153.9	120.8	90.1	79.1	98.9	103.3	79.1	61.5	59.3
77.5°	7652.9	1688.0	103.3	76.9	57.1	46.1	68.2	63.8	41.7	28.6	30.7
80°	3360.5	703.3	59.3	35.2	21.9	17.6	24.2	17.6	13.2	8.8	8.8
82.5°	393.4	164.8	21.9	13.2	8.8	4.4	2.2	0.0	0.0	0.0	0.0
85°	81.3	19.8	11.0	4.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	15.4	4.4	2.2	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)