

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: P969445

Luminaire Tested: **NAV-SB5D-827-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969445
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-827-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45283.5 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

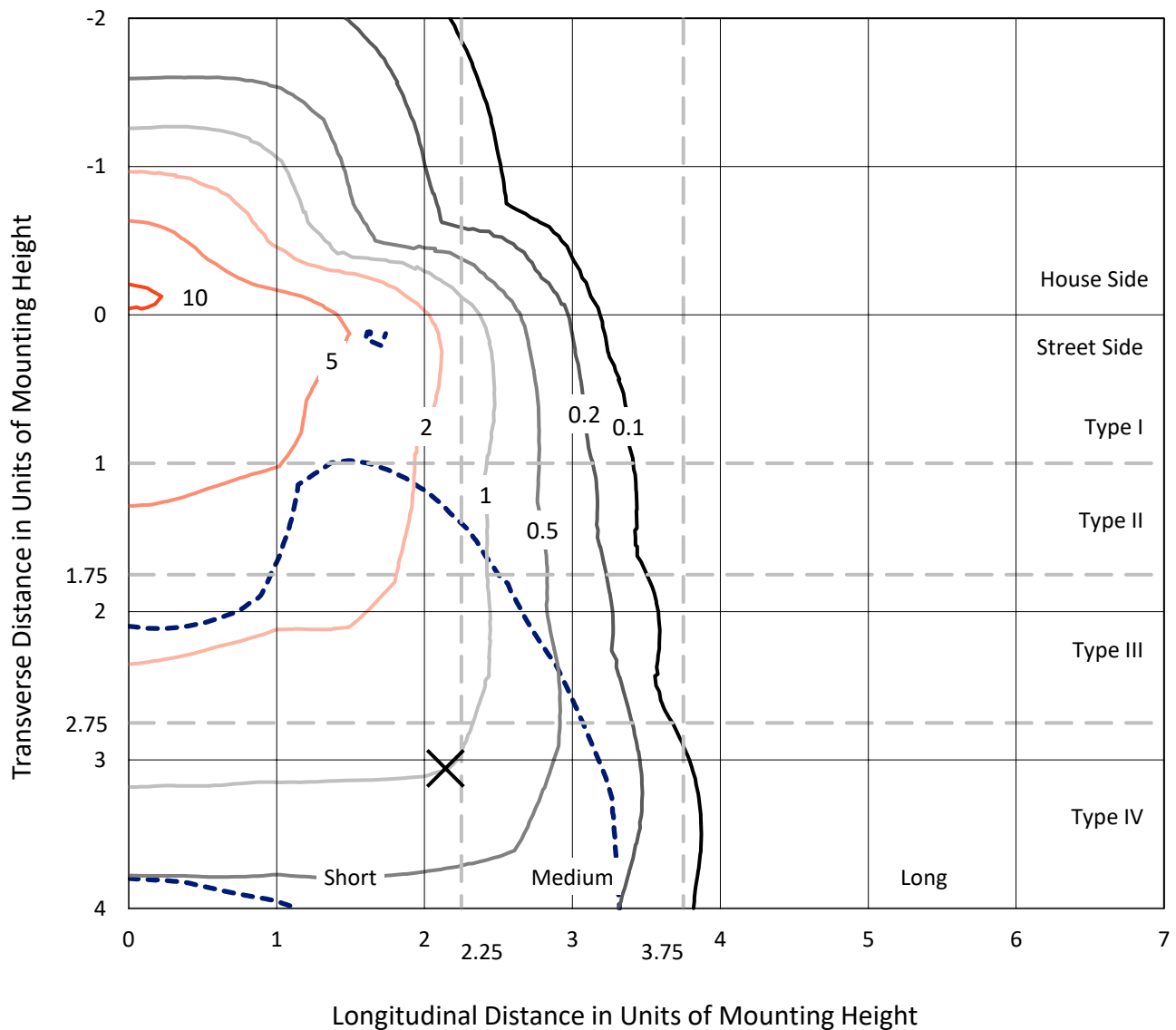
Input Watts (W): 364.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

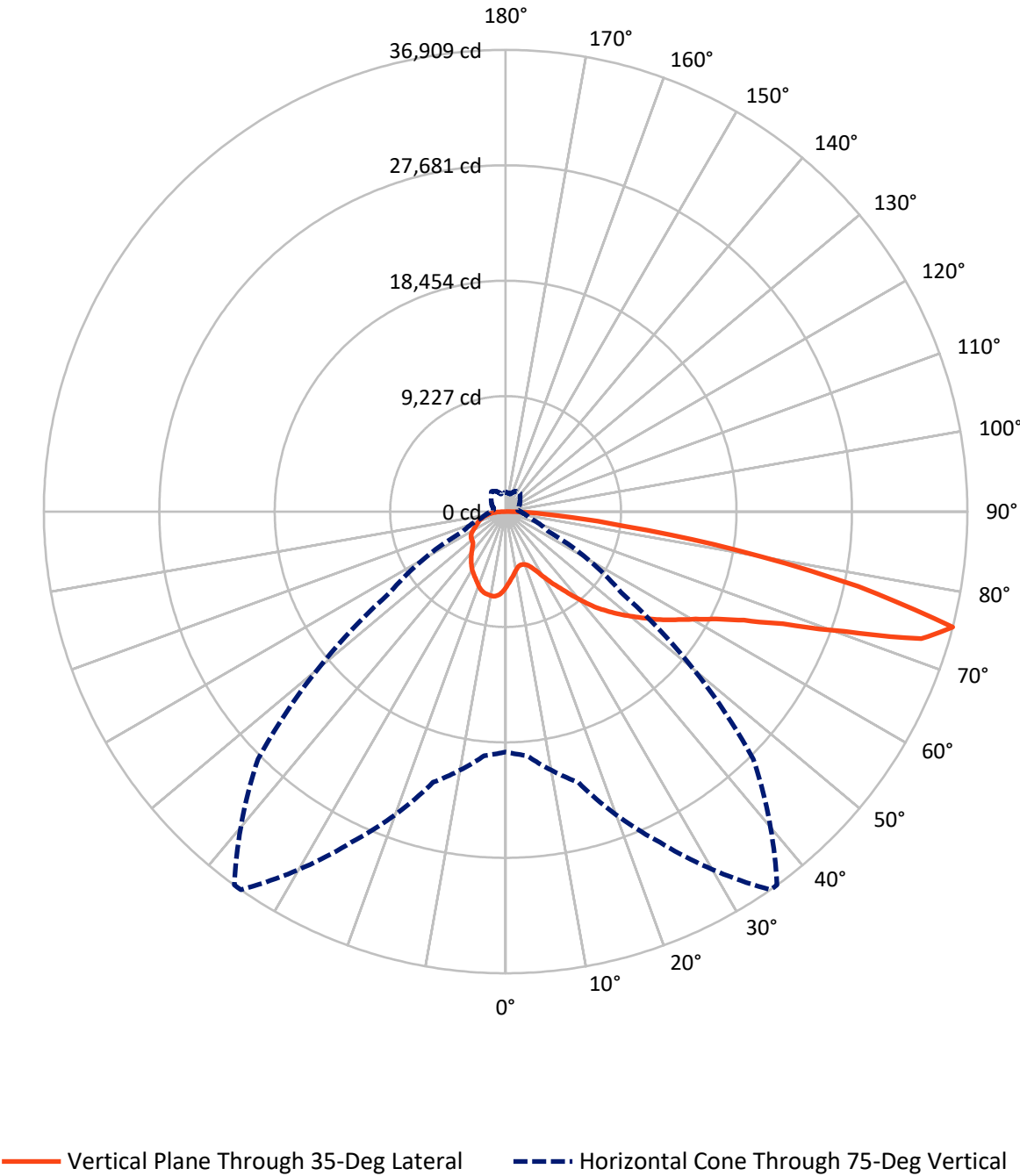
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.7 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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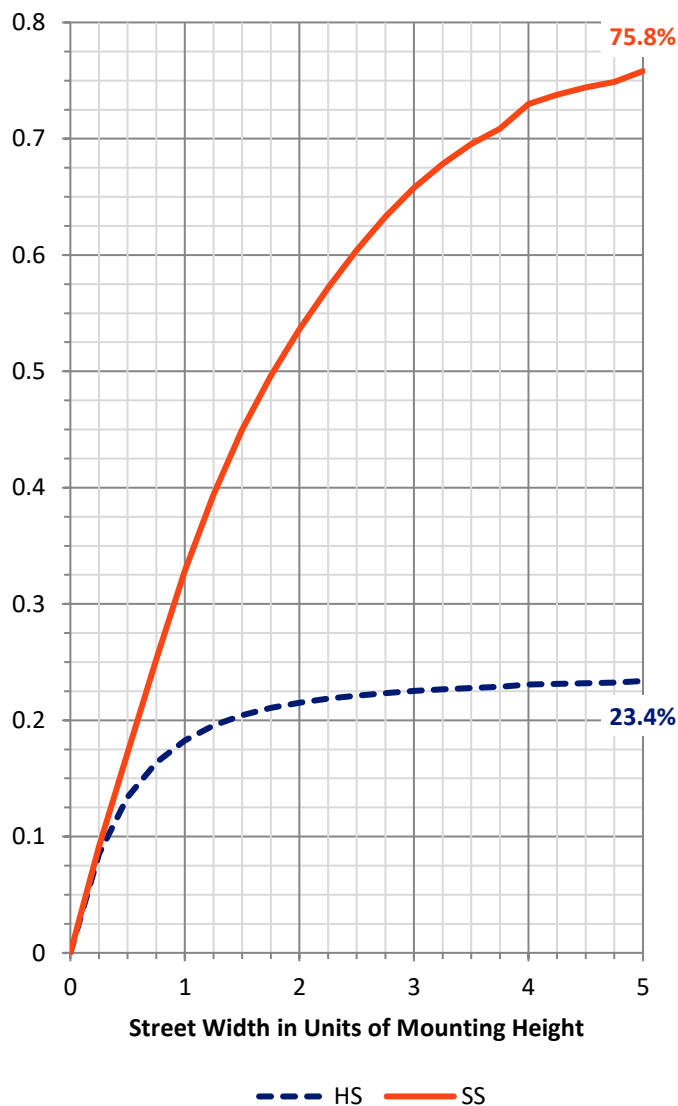
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10776.3	0.0	10776.3
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	34507.1	0.0	34507.1
	% Fixture	76.2	0.0	76.2
Total	Lumens	45283.5	0.0	45283.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	571.3	1.3
10°-20°	1648.0	3.6
20°-30°	2767.4	6.1
30°-40°	4300.9	9.5
40°-50°	6383.6	14.1
50°-60°	8813.0	19.5
60°-70°	10692.2	23.6
70°-80°	8836.2	19.5
80°-90°	1270.9	2.8
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°	45283.5	100.0
0°-180°	45283.5	100.0

Coefficient of Utilization



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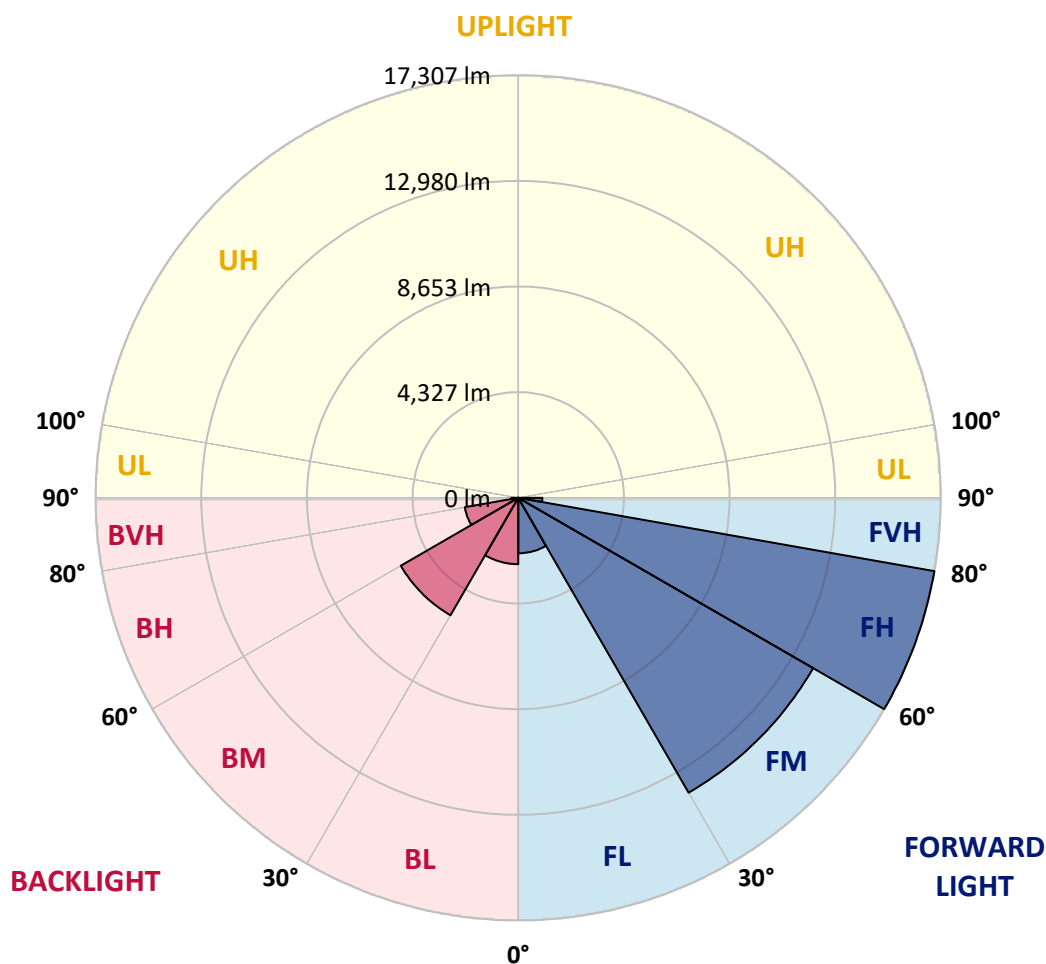
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2270.9	5.0			
FM	(30°-60°)	13944.9	30.8			
FH	(60°-80°)	17306.7	38.2			G5
FVH	(80°-90°)	984.7	2.2			G5
BL	(0°-30°)	2715.8	6.0	B4/5000		
BM	(30°-60°)	5552.6	12.3	B4/8500		
BH	(60°-80°)	2221.7	4.9	B3/2500		G3/2500
BVH	(80°-90°)	286.2	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4
2.5°	5564.3	5598.5	5613.3	5605.9	5642.6	5637.7	5689.2	5752.8	5841.0	5926.7	6051.5
5°	5135.9	5172.7	5204.4	5233.9	5304.8	5326.8	5407.6	5530.1	5691.6	5855.6	6061.2
7.5°	4736.9	4768.7	4817.7	4871.5	4991.4	5013.5	5148.2	5339.1	5564.3	5804.3	6088.2
10°	4411.3	4443.2	4494.5	4555.7	4705.1	4732.0	4903.4	5157.9	5451.7	5755.3	6117.6
12.5°	4271.8	4281.5	4310.9	4372.1	4501.9	4519.0	4707.5	4998.8	5341.6	5718.6	6161.6
15°	4264.4	4284.0	4286.4	4318.3	4426.0	4433.3	4607.2	4896.0	5273.0	5711.2	6227.7
17.5°	4337.9	4352.6	4330.5	4350.1	4440.7	4452.9	4590.1	4847.0	5251.0	5743.0	6340.3
20°	4533.7	4546.0	4479.9	4452.9	4519.0	4528.8	4663.4	4878.9	5273.0	5809.1	6494.6
22.5°	4949.8	4957.2	4795.7	4685.5	4690.4	4695.3	4812.8	5008.7	5358.7	5929.1	6690.4
25°	5598.5	5593.7	5336.7	5123.7	5001.3	4974.3	5052.6	5219.1	5503.1	6088.2	6942.5
27.5°	6357.5	6320.8	6063.7	5745.4	5478.6	5439.5	5422.4	5493.3	5708.7	6298.7	7251.0
30°	7214.3	7180.0	6903.4	6487.2	6117.6	6054.0	5892.3	5855.6	6014.7	6585.1	7679.4
32.5°	8154.3	8132.2	7801.8	7297.5	6803.0	6729.5	6457.8	6359.9	6484.8	7018.4	8276.7
35°	8942.5	8922.9	8648.8	8129.8	7525.1	7434.6	7158.0	7047.8	7111.4	7574.1	9057.6
37.5°	9654.9	9645.1	9410.1	9001.3	8377.1	8266.9	7956.0	7919.3	7907.1	8306.1	10005.0
40°	10315.9	10291.4	10046.6	9831.2	9368.5	9268.2	8994.0	8962.2	8869.1	9207.0	11077.2
42.5°	11047.9	10984.2	10629.2	10528.9	10404.1	10320.8	10156.7	10161.6	9956.0	10222.8	12213.1
45°	11645.1	11608.4	11243.6	11184.9	11319.6	11285.2	11427.3	11464.0	11065.0	11287.7	13393.1
47.5°	12286.6	12252.2	11943.8	11902.2	12267.0	12276.7	12778.6	12790.8	12147.0	12394.2	14575.4
50°	13077.3	13028.3	12722.3	12773.7	13182.5	13219.2	14137.2	14054.0	13143.4	13517.9	15748.0
52.5°	13598.7	13628.0	13562.0	13645.2	14203.3	14237.6	15473.8	15260.8	14129.8	14626.9	16898.6
55°	13982.9	14041.8	14247.4	14438.4	15280.4	15314.7	16734.6	16409.0	14947.5	15655.0	17980.6
57.5°	14477.5	14394.3	14778.6	15150.7	16303.8	16394.3	17961.0	17515.5	15672.1	16541.1	18722.3
60°	15187.4	15128.7	15427.3	15978.1	17449.4	17593.8	19258.4	18511.8	16203.3	17243.8	18866.8
62.5°	16626.8	16479.9	16526.5	17013.7	18893.7	19084.7	20722.3	19380.8	16467.8	17517.9	18093.2
65°	18778.6	18526.5	18291.5	18629.3	20927.9	21116.4	22374.7	20063.9	16369.8	16986.7	16039.3
67.5°	21488.6	21238.9	20950.0	21268.2	23924.3	24073.7	24414.0	20448.1	15598.7	14940.2	12409.0
70°	23723.6	23630.6	23975.8	25285.4	28710.1	28715.1	27028.4	20130.0	13486.0	10592.6	7180.0
72.5°	23427.4	23371.1	25190.0	29238.9	34742.1	34612.3	29503.3	17721.1	9084.6	4778.5	2690.3
75°	19219.3	19584.1	22401.7	29168.0	36908.5	36891.4	27988.0	11265.7	3757.6	1980.4	1390.5
77.5°	10306.1	10883.9	14543.6	21535.0	28813.0	29246.3	19677.0	3941.3	1613.2	1268.0	962.1
80°	3361.1	3865.4	5796.9	10964.6	18722.3	18641.6	8433.4	1547.1	1104.0	898.4	665.8
82.5°	1427.2	1485.9	2590.0	5177.5	9608.5	9459.1	2685.5	888.7	776.0	614.5	411.2
85°	558.1	624.2	1143.2	2394.2	4161.6	4071.0	969.4	440.6	496.9	401.5	244.8
87.5°	183.6	222.7	408.8	820.1	1295.0	1248.4	237.5	151.8	215.5	183.6	88.1
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°	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4	6034.4
2.5°	6085.7	6124.9	6171.4	6240.0	6298.7	6347.7	6399.1	6431.0	6443.2	6479.8	6477.4
5°	6129.8	6215.5	6330.5	6443.2	6553.3	6619.4	6678.2	6707.5	6734.5	6754.0	6759.0
7.5°	6203.2	6313.4	6494.6	6641.4	6734.5	6788.3	6827.5	6817.7	6827.5	6832.3	6839.7
10°	6266.8	6421.1	6636.6	6776.1	6847.1	6849.6	6839.7	6805.5	6788.3	6790.7	6795.6
12.5°	6342.8	6514.2	6746.7	6864.2	6883.8	6829.9	6788.3	6729.5	6707.5	6697.8	6692.8
15°	6445.6	6641.4	6866.7	6910.8	6861.8	6793.2	6722.3	6626.7	6577.8	6538.6	6550.9
17.5°	6570.5	6785.9	6959.6	6927.9	6822.6	6710.0	6595.0	6450.5	6350.1	6308.5	6310.9
20°	6744.3	6937.6	7030.7	6891.2	6732.0	6560.6	6364.8	6188.5	6095.6	6054.0	6049.0
22.5°	6954.8	7140.9	7099.3	6827.5	6602.2	6328.0	6083.3	5953.5	5907.1	5877.7	5882.6
25°	7206.9	7366.1	7148.1	6734.5	6389.3	6019.6	5831.1	5789.5	5767.5	5745.4	5745.4
27.5°	7535.0	7620.7	7184.8	6597.4	6056.3	5691.6	5623.0	5630.4	5623.0	5586.4	5593.7
30°	7968.2	7951.1	7219.2	6374.6	5674.5	5395.4	5400.3	5432.1	5437.0	5412.5	5424.8
32.5°	8538.7	8364.8	7236.3	6085.7	5309.7	5135.9	5140.8	5175.1	5199.5	5157.9	5177.5
35°	9229.0	8847.1	7209.3	5723.4	5028.2	4888.6	4851.9	4861.8	4869.1	4829.9	4856.9
37.5°	10034.3	9388.1	7089.4	5322.0	4795.7	4646.3	4568.0	4501.9	4462.7	4426.0	4450.4
40°	10918.1	9978.1	6869.1	4930.2	4536.1	4389.3	4271.8	4146.9	4014.7	3965.7	3987.8
42.5°	11843.5	10585.2	6602.2	4555.7	4237.5	4117.5	3992.7	3811.6	3613.2	3512.9	3525.1
45°	12803.1	11206.9	6340.3	4186.1	3931.5	3880.0	3735.6	3517.8	3302.3	3175.0	3165.3
47.5°	13743.1	11794.5	5956.0	3814.0	3645.1	3701.4	3588.7	3388.0	3148.1	2947.4	2925.4
50°	14641.5	12345.3	5326.8	3437.0	3412.5	3647.6	3539.8	3251.0	2976.8	2719.7	2697.7
52.5°	15532.5	12790.8	4521.5	3094.3	3287.7	3632.8	3476.2	3157.9	2822.5	2553.3	2523.9
55°	16289.0	13020.9	3745.5	2800.5	3106.5	3508.0	3400.2	3047.7	2604.6	2318.2	2293.7
57.5°	16719.9	12834.8	3099.2	2511.7	2856.8	3302.3	3270.6	2812.8	2345.2	2124.8	2095.5
60°	16533.9	12080.9	2570.4	2259.5	2619.4	3079.6	3045.3	2580.2	2146.9	1938.8	1909.5
62.5°	15508.1	10643.9	2151.8	2039.2	2403.9	2852.0	2820.1	2401.5	1995.2	1794.4	1762.6
65°	13442.0	8658.6	1826.2	1855.6	2186.0	2577.8	2624.3	2252.1	1875.1	1679.4	1647.5
67.5°	10252.3	6271.8	1571.6	1696.5	1973.1	2308.5	2443.1	2144.4	1774.8	1588.7	1559.3
70°	5843.4	3561.9	1356.2	1542.2	1784.6	2058.8	2303.6	2058.8	1667.1	1512.9	1493.3
72.5°	2215.4	1635.3	1172.6	1388.1	1603.4	1848.3	2149.3	1924.1	1542.2	1427.2	1407.6
75°	1182.3	996.3	986.6	1206.8	1395.3	1642.6	1955.9	1791.9	1449.2	1508.0	1557.0
77.5°	805.3	705.0	825.0	1033.1	1167.7	1414.9	1750.3	1591.2	1255.8	1250.9	1153.0
80°	558.1	499.4	670.8	832.3	903.3	1189.7	1527.6	1366.0	1023.3	954.7	913.1
82.5°	335.4	325.5	501.8	621.8	638.9	918.0	1265.6	1145.6	837.2	729.5	734.4
85°	183.6	193.4	320.7	364.8	372.1	641.3	991.5	886.2	643.8	541.0	545.9
87.5°	51.5	66.1	117.5	144.4	178.7	332.9	590.0	526.3	323.2	225.2	225.2
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)