

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: P963097

Luminaire Tested: **NAV-SB2D-827-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18446.9 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 147.6
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

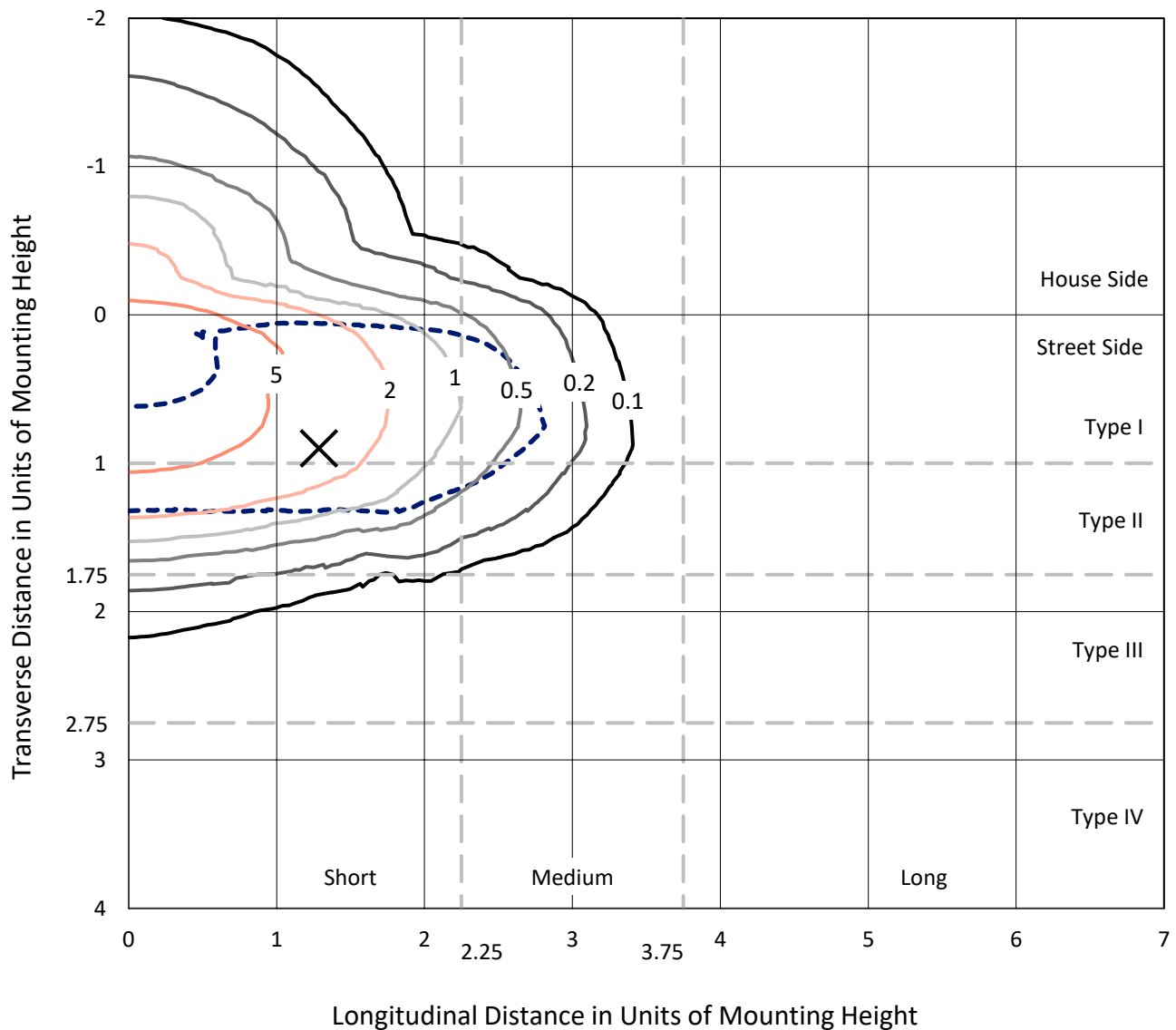


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Iso-Footcandle Lines of Horizontal Illumination

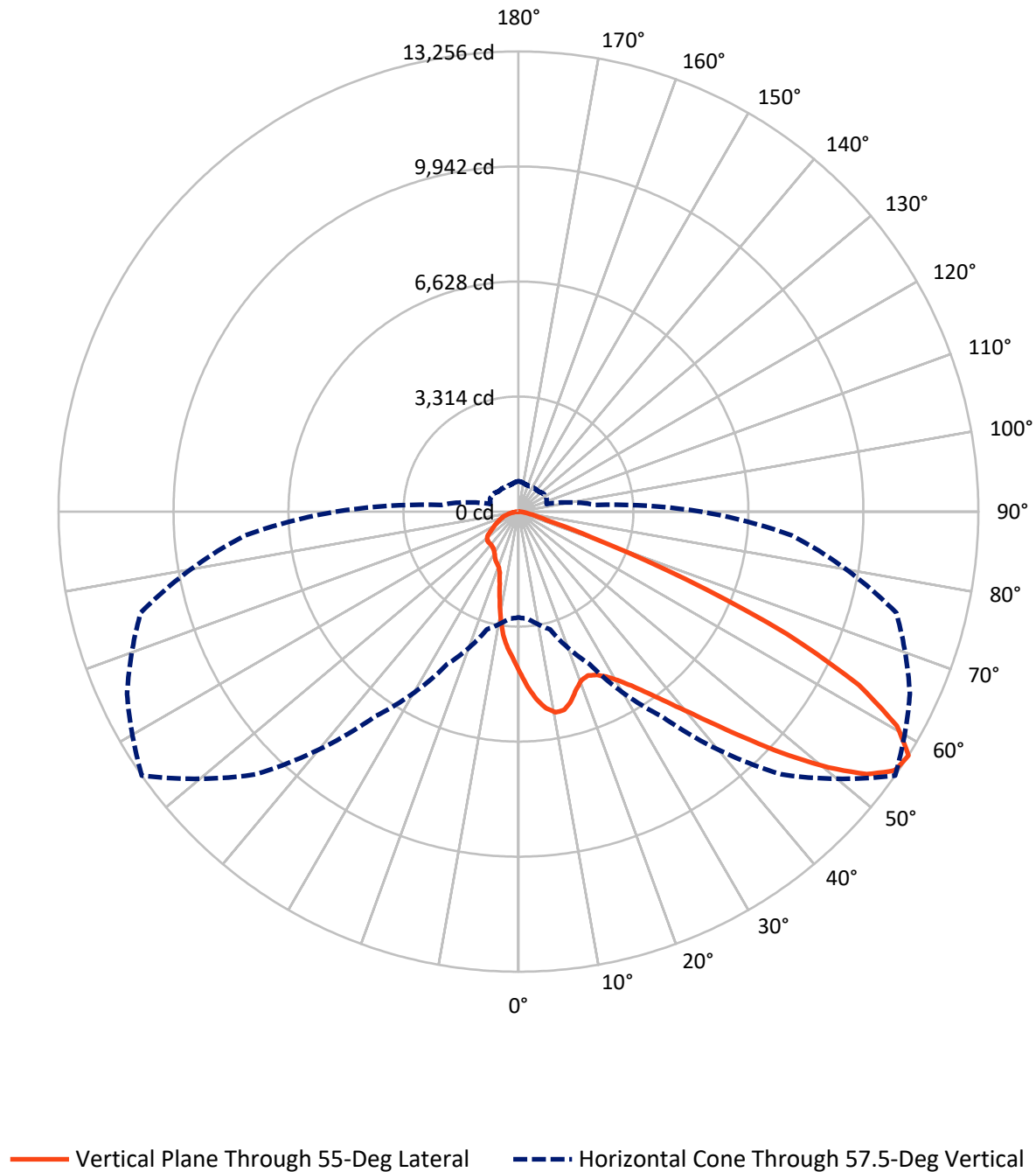
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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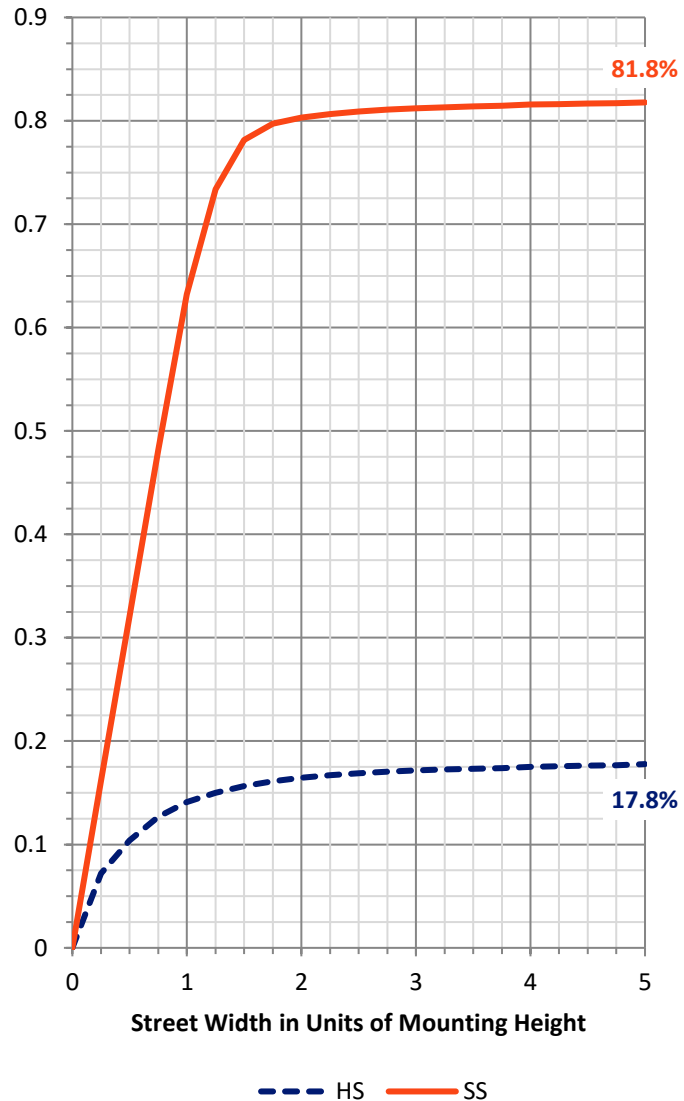
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3337.9	0.0	3337.9
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	15109.1	0.0	15109.1
	% Fixture	81.9	0.0	81.9
Total	Lumens	18446.9	0.0	18446.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.9	2.3
10°-20°	1082.6	5.9
20°-30°	1727.5	9.4
30°-40°	2735.1	14.8
40°-50°	4186.3	22.7
50°-60°	4483.9	24.3
60°-70°	2820.9	15.3
70°-80°	834.2	4.5
80°-90°	147.5	0.8
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°	18446.9	100.0
0°-180°	18446.9	100.0

Coefficient of Utilization



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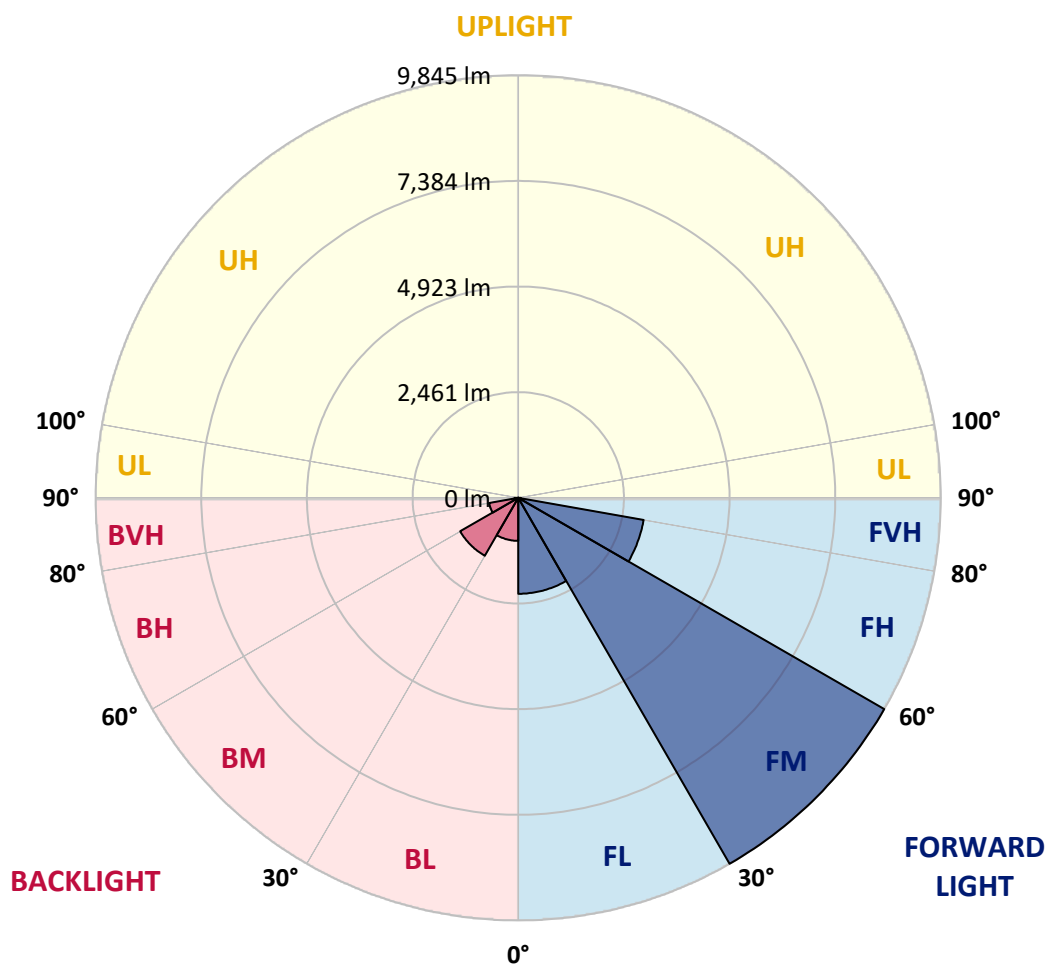
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2235.8	12.1			
FM	(30°-60°)	9845.3	53.4			
FH	(60°-80°)	2965.7	16.1			G2/5000
FVH	(80°-90°)	62.3	0.3			G1/100
BL	(0°-30°)	1003.3	5.4	B3/2500		
BM	(30°-60°)	1560.1	8.5	B2/2500		
BH	(60°-80°)	689.4	3.7	B2/1000		G2/1000
BVH	(80°-90°)	85.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2
2.5°	5303.0	5299.2	5320.3	5248.7	5200.1	5134.3	5047.5	4936.9	4817.7	4691.8	4637.4
5°	5780.9	5747.5	5769.4	5716.0	5662.6	5563.4	5434.7	5254.5	5034.2	4783.4	4649.8
7.5°	5705.6	5682.6	5738.9	5786.5	5826.6	5814.2	5719.8	5531.0	5246.9	4882.6	4689.0
10°	5098.0	5072.3	5151.4	5316.5	5558.7	5769.4	5883.8	5766.5	5464.3	4991.2	4727.1
12.5°	4562.2	4549.8	4602.1	4735.7	5004.6	5408.9	5862.9	5972.6	5690.3	5120.0	4778.5
15°	4333.3	4318.0	4351.3	4419.1	4590.8	4967.5	5672.1	6113.7	5912.4	5268.7	4860.7
17.5°	4282.8	4265.5	4279.9	4315.1	4425.7	4712.7	5384.1	6183.3	6144.2	5434.7	4929.2
20°	4376.1	4361.9	4363.7	4361.9	4439.1	4667.0	5183.8	6156.6	6346.4	5587.3	4996.1
22.5°	4602.1	4578.4	4579.3	4528.8	4570.7	4747.1	5131.5	6085.0	6526.6	5720.7	5046.6
25°	4970.2	4927.4	4936.0	4807.2	4795.8	4926.4	5213.5	6029.8	6705.9	5827.5	5056.1
27.5°	5473.8	5425.1	5399.4	5207.7	5116.2	5181.1	5380.3	6048.8	6875.6	5920.1	5032.2
30°	6103.2	6044.0	5991.6	5719.8	5553.9	5530.1	5639.8	6174.7	7075.9	6017.4	4991.2
32.5°	6874.7	6806.0	6710.7	6350.2	6116.5	5991.6	5975.3	6398.8	7310.5	6141.3	4970.2
35°	7793.0	7703.4	7568.0	7101.6	6806.0	6550.5	6417.8	6722.1	7631.8	6328.2	4994.1
37.5°	8738.9	8637.9	8514.0	7958.9	7595.6	7218.9	6957.6	7160.8	8060.0	6581.9	5057.0
40°	9611.5	9498.1	9382.6	8888.7	8498.7	8044.7	7618.5	7715.8	8583.6	6885.1	5163.8
42.5°	10126.5	10042.5	9998.7	9731.7	9430.3	8969.8	8440.5	8373.7	9171.9	7234.1	5285.9
45°	10103.6	10069.3	10204.7	10315.3	10243.7	9988.2	9403.7	9101.4	9762.2	7536.4	5398.5
47.5°	9563.9	9586.7	9889.1	10510.8	10784.5	10918.0	10500.3	9815.6	10275.2	7762.4	5449.0
50°	8095.2	8114.3	8814.3	10155.1	10923.7	11676.2	11588.4	10512.7	10672.9	7900.7	5437.5
52.5°	6932.8	6945.2	7245.6	9100.4	10464.1	12057.6	12568.8	11169.7	10963.8	7938.9	5373.7
55°	5222.1	5264.9	5601.5	7139.7	9268.3	11755.3	13165.7	11846.8	11147.8	7942.7	5306.9
57.5°	3050.6	3097.3	3513.2	4846.3	7203.7	10701.5	13256.3	12447.6	11272.7	7912.2	5266.9
60°	1494.3	1514.3	1695.6	2547.1	4441.9	8671.3	12527.8	12738.5	11342.3	7896.0	5264.9
62.5°	1007.1	1004.2	1011.8	1256.9	2188.6	5571.1	11009.5	12229.3	11305.1	7834.0	5245.8
65°	865.9	855.4	826.8	882.1	1133.9	2548.0	8506.3	10709.2	11021.9	7678.6	5115.3
67.5°	748.6	749.6	750.5	733.3	809.6	1175.8	5198.2	8435.8	10005.4	6942.3	4611.7
70°	619.8	628.4	632.2	632.2	659.9	771.5	2219.1	5781.8	7892.2	5443.3	3714.4
72.5°	564.6	546.4	548.4	538.8	538.8	587.4	893.5	3277.6	4972.2	3062.1	2266.8
75°	460.6	472.0	474.0	467.3	445.4	448.2	530.2	1375.1	2127.5	1270.2	1120.5
77.5°	397.7	397.7	401.5	396.7	379.6	335.7	353.8	533.1	723.8	520.7	559.8
80°	319.5	318.5	334.8	344.3	317.5	247.9	226.0	294.7	321.3	228.9	290.9
82.5°	155.4	165.0	229.8	262.2	241.3	179.3	138.3	183.1	171.7	101.1	130.7
85°	90.6	85.8	103.0	145.9	138.3	99.2	66.7	95.3	89.7	51.5	52.5
87.5°	28.6	26.8	21.0	49.6	40.1	27.7	18.1	27.7	24.8	11.5	11.5
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°	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2	4622.2
2.5°	4569.8	4457.2	4345.7	4243.6	4181.6	4141.6	4101.5	4056.7	4039.5	4013.8
5°	4523.9	4306.5	4113.0	3946.0	3794.4	3675.2	3555.1	3457.8	3414.0	3443.5
7.5°	4497.3	4182.6	3884.1	3578.0	3283.3	3047.7	2842.7	2698.7	2633.9	2650.1
10°	4473.4	4042.4	3587.5	3104.0	2680.6	2388.9	2179.0	2069.4	2028.4	2037.0
12.5°	4451.5	3885.1	3229.9	2593.9	2143.8	1951.1	1891.0	1891.9	1899.6	1905.4
15°	4447.7	3695.3	2830.3	2147.6	1853.8	1841.4	1906.3	1947.3	1969.2	1975.9
17.5°	4441.9	3468.3	2423.1	1843.4	1783.3	1867.1	1927.3	1954.0	1971.2	1972.1
20°	4419.1	3180.4	2047.4	1698.4	1768.0	1840.5	1877.7	1898.7	1913.0	1917.8
22.5°	4348.6	2860.0	1754.7	1633.5	1706.9	1765.2	1809.0	1832.9	1841.4	1847.2
25°	4221.7	2501.3	1552.5	1571.5	1622.1	1695.6	1730.8	1735.6	1732.8	1741.3
27.5°	4055.7	2117.0	1426.6	1487.7	1552.5	1615.4	1634.5	1631.6	1626.0	1635.5
30°	3855.5	1771.8	1346.5	1393.3	1481.9	1539.1	1556.4	1549.6	1538.2	1548.7
32.5°	3643.8	1489.5	1280.7	1327.5	1423.7	1480.0	1497.2	1490.6	1481.9	1490.6
35°	3446.4	1292.1	1219.6	1283.6	1378.0	1433.3	1455.2	1456.2	1456.2	1466.7
37.5°	3265.2	1176.8	1169.1	1255.9	1346.5	1396.0	1427.6	1429.5	1388.5	1391.3
40°	3097.3	1128.1	1146.3	1237.8	1316.0	1363.7	1365.6	1258.8	1183.5	1181.5
42.5°	2960.0	1118.6	1152.9	1235.8	1294.1	1296.0	1161.5	1078.5	1057.6	1058.5
45°	2831.3	1115.7	1168.2	1235.8	1261.7	1119.5	1029.0	1007.1	1008.9	1016.6
47.5°	2687.3	1104.3	1171.1	1218.7	1168.2	995.6	968.8	959.3	955.5	957.5
50°	2530.0	1063.3	1134.8	1184.4	1008.0	942.2	908.8	905.9	910.7	913.6
52.5°	2364.1	996.5	1072.9	1122.4	934.6	895.4	858.2	864.9	885.9	892.6
55°	2255.3	918.3	990.8	998.5	883.0	851.6	820.1	835.4	874.4	886.8
57.5°	2226.7	835.4	897.4	888.8	817.2	813.4	794.4	807.7	857.3	875.5
60°	2218.1	761.0	805.9	799.1	753.4	771.5	766.7	773.4	790.6	796.3
62.5°	2151.4	701.8	723.8	714.2	696.2	727.6	739.0	724.8	738.1	744.8
65°	1981.6	654.2	643.7	637.0	644.6	673.2	696.2	667.6	679.9	699.0
67.5°	1701.3	589.4	560.8	568.4	592.2	607.4	637.0	604.5	615.1	647.5
70°	1376.1	507.4	481.5	503.5	526.4	557.9	562.6	540.7	565.5	601.8
72.5°	973.6	424.4	406.2	451.1	458.7	499.7	489.2	478.7	513.0	525.4
75°	675.2	342.3	331.9	366.2	393.8	429.2	421.5	433.9	506.4	512.1
77.5°	427.2	266.1	259.4	281.4	319.5	358.5	370.9	512.1	864.9	899.2
80°	247.9	198.3	190.8	207.9	241.3	277.5	357.6	628.4	570.3	563.5
82.5°	138.3	136.3	126.8	131.6	161.1	200.3	505.4	442.5	359.5	370.9
85°	64.9	80.2	68.7	65.8	90.6	234.6	337.5	252.7	167.8	164.0
87.5°	17.1	15.3	15.3	17.1	38.1	202.1	134.5	107.7	63.9	62.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)