

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: P966306

Luminaire Tested: **NAV-SB4B-830-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966306
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-SB4B-830-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA 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: 15885.5 lumens
Efficiency: N/A
Efficacy: 108.1 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

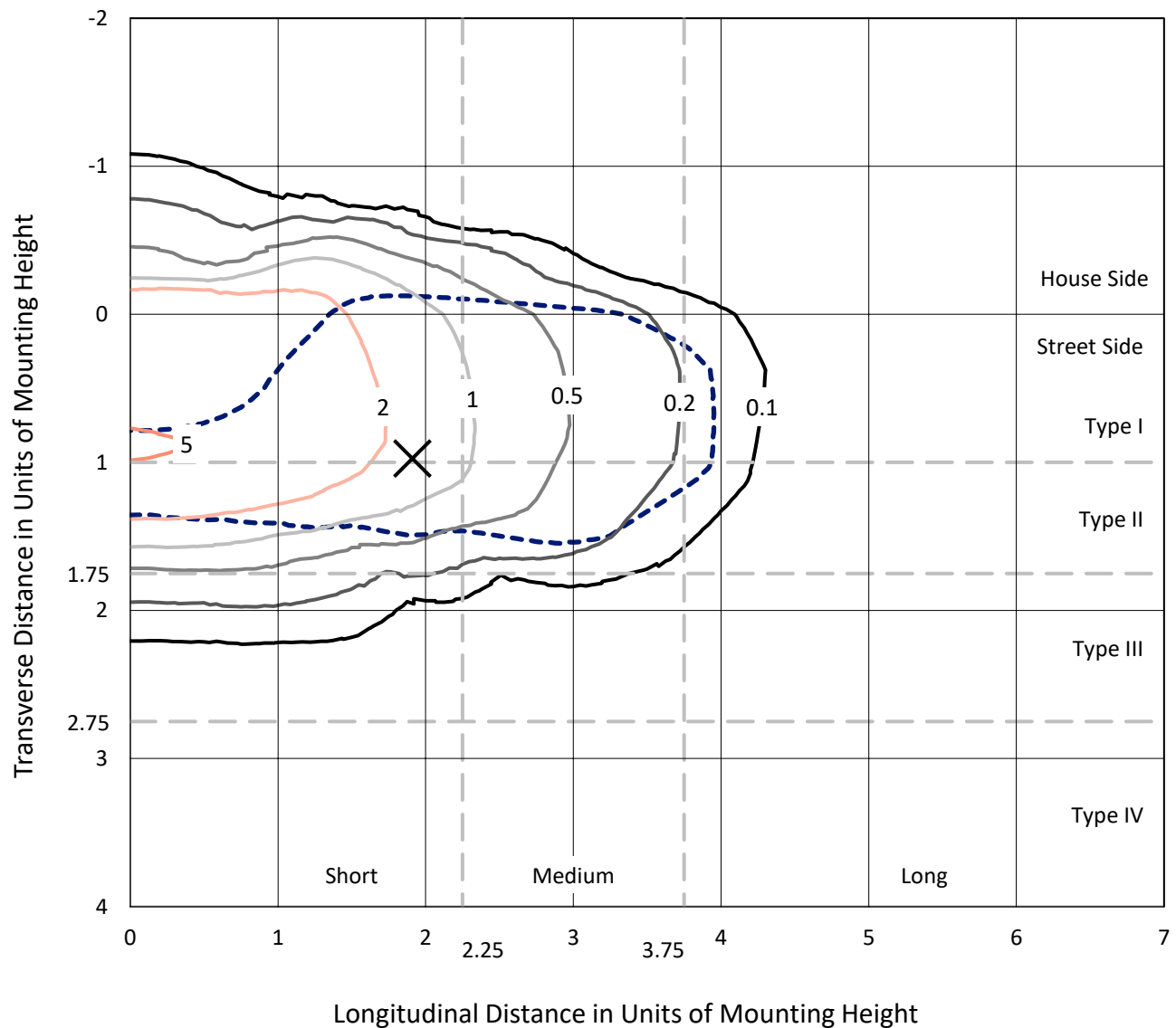


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Iso-Footcandle Lines of Horizontal Illumination

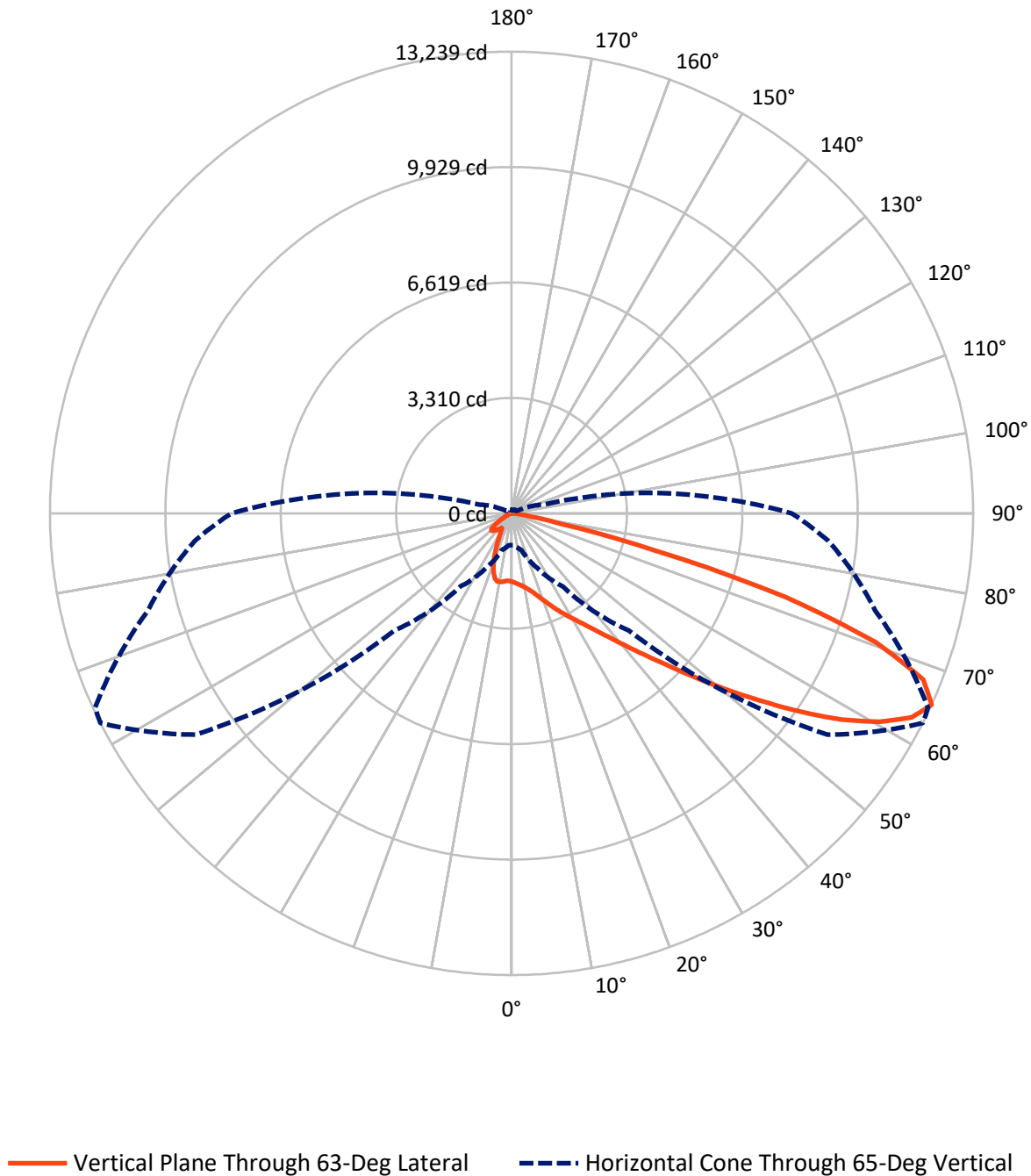
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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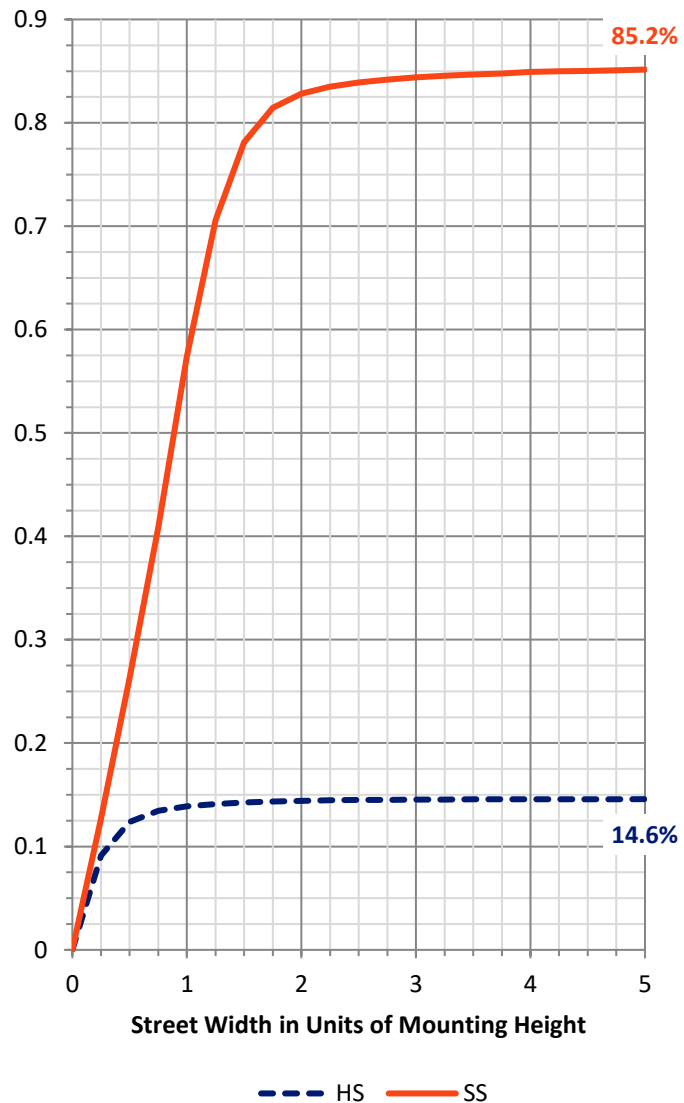
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2335.0	0.0	2335.0
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	13550.4	0.0	13550.4
	% Fixture	85.3	0.0	85.3
Total	Lumens	15885.5	0.0	15885.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.7	1.2
10°-20°	512.5	3.2
20°-30°	892.5	5.6
30°-40°	1608.6	10.1
40°-50°	3190.3	20.1
50°-60°	4345.7	27.4
60°-70°	3468.7	21.8
70°-80°	1569.7	9.9
80°-90°	112.8	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°	15885.5	100.0
0°-180°	15885.5	100.0

Coefficient of Utilization



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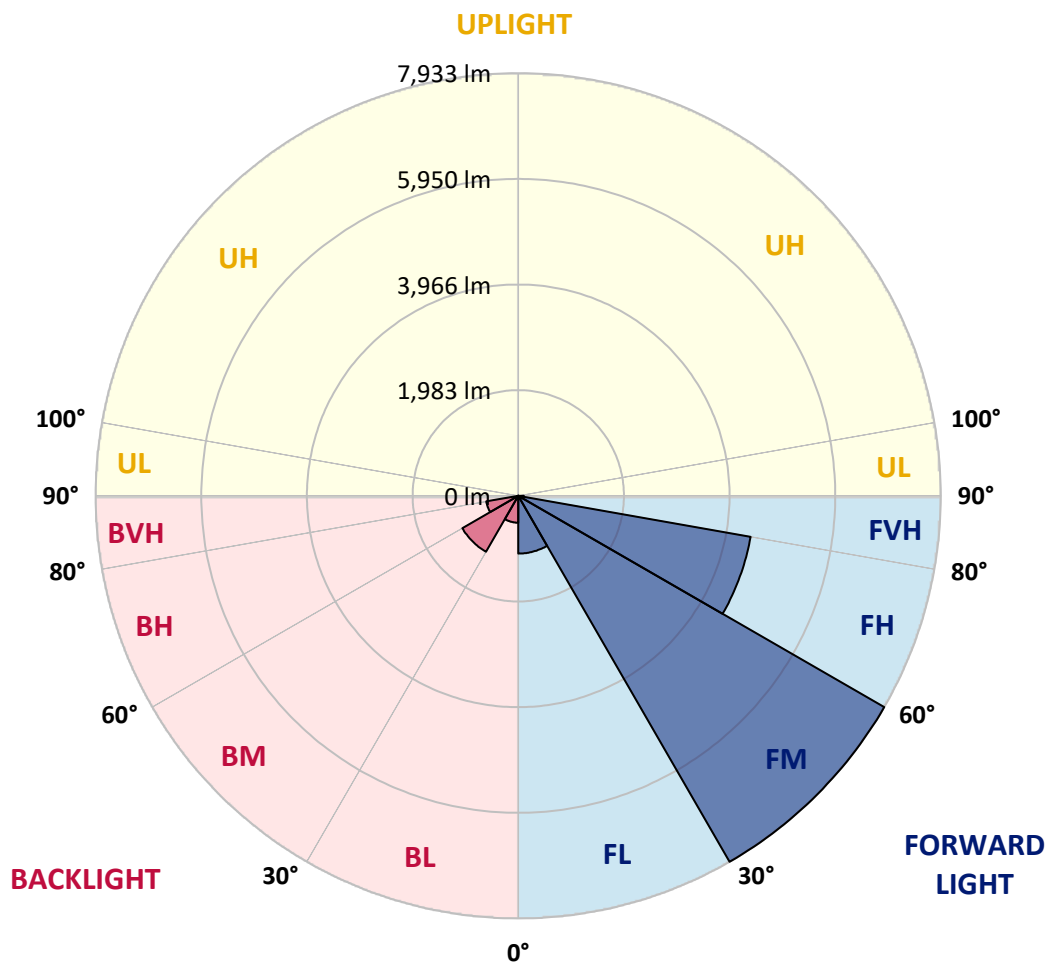
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1084.4	6.8			
FM	(30°-60°)	7932.8	49.9			
FH	(60°-80°)	4428.8	27.9			G2/5000
FVH	(80°-90°)	104.5	0.7			G2/225
BL	(0°-30°)	505.3	3.2	B2/1000		
BM	(30°-60°)	1211.7	7.6	B2/2500		
BH	(60°-80°)	609.6	3.8	B2/1000		G2/1000
BVH	(80°-90°)	8.4	0.1			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°	63°	65°	75°	85°
0°	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5
2.5°	2006.4	2001.0	2008.7	2005.4	2003.2	1998.9	1996.6	1994.4	1990.0	1986.8	1973.6
5°	2012.0	2008.7	2016.3	2022.8	2029.4	2036.0	2039.2	2043.6	2039.2	2030.5	2017.4
7.5°	1966.1	1963.8	1980.2	1999.9	2029.4	2054.5	2081.9	2097.1	2098.3	2095.0	2080.8
10°	1962.8	1957.2	1973.6	1997.7	2036.0	2080.8	2128.8	2161.6	2166.0	2180.3	2164.9
12.5°	2014.1	2008.7	2031.5	2057.8	2097.1	2144.2	2203.1	2249.1	2255.6	2275.3	2264.3
15°	2100.4	2092.8	2119.0	2152.9	2203.1	2256.7	2319.1	2360.6	2366.0	2390.1	2370.4
17.5°	2201.0	2193.3	2223.9	2260.0	2314.7	2387.8	2460.0	2505.9	2512.5	2527.8	2491.7
20°	2329.9	2320.1	2344.2	2377.0	2434.9	2522.3	2608.6	2674.2	2673.1	2673.1	2614.1
22.5°	2479.7	2464.4	2485.1	2511.4	2566.0	2672.0	2786.8	2864.4	2864.4	2833.7	2736.4
25°	2640.3	2625.0	2648.0	2672.0	2720.0	2840.3	2974.8	3070.9	3075.3	3022.8	2867.6
27.5°	2841.4	2821.7	2839.2	2867.6	2896.0	3018.4	3178.0	3289.4	3291.7	3210.8	2992.2
30°	3228.2	3172.6	3117.8	3087.3	3100.4	3221.7	3392.2	3515.6	3526.6	3415.1	3127.7
32.5°	3936.4	3925.5	3733.2	3481.8	3350.6	3440.3	3631.6	3780.2	3786.8	3643.6	3303.7
35°	5037.0	5023.8	4714.5	4235.9	3808.6	3733.2	3922.3	4098.2	4093.8	3932.1	3532.0
37.5°	6350.5	6338.5	5930.9	5290.4	4598.7	4175.7	4297.1	4481.7	4509.1	4297.1	3827.1
40°	7472.9	7428.1	7170.2	6552.7	5647.9	4910.2	4830.4	4952.8	4981.2	4729.9	4202.0
42.5°	8323.1	8284.9	8153.7	7768.0	6917.7	5996.5	5458.7	5505.8	5537.5	5235.8	4632.6
45°	8763.5	8754.8	8807.2	8771.1	8211.7	7329.7	6357.0	6161.5	6173.5	5796.5	5121.1
47.5°	8825.9	8821.5	9060.8	9399.6	9324.1	8833.4	7510.1	6978.9	6936.3	6429.2	5652.2
50°	8458.6	8449.9	8908.9	9543.8	10067.2	10096.8	8819.3	7900.2	7806.2	7083.8	6206.3
52.5°	7286.0	7283.9	8037.8	9094.6	10328.5	11202.7	10113.2	8912.2	8754.8	7776.7	6792.1
55°	5606.3	5646.7	6511.2	7760.3	9852.0	11735.0	11274.9	10035.6	9794.1	8473.9	7331.9
57.5°	3971.4	4030.4	4885.0	5997.6	8374.5	11420.2	12060.7	11161.2	10901.2	9168.9	7879.4
60°	2133.2	2185.7	3041.4	4369.2	6230.4	10246.5	12474.9	12138.3	11892.4	9829.0	8373.4
62.5°	1271.0	1288.4	1642.6	2820.6	4214.0	7828.0	12298.9	12882.5	12680.3	10383.1	8802.9
65°	912.6	915.8	1094.0	1722.3	2558.4	4756.1	11065.1	13238.7	13176.5	10800.6	9120.9
67.5°	768.2	766.1	840.4	1144.2	1743.1	2382.4	8480.4	12734.9	12999.4	11065.1	9301.2
70°	659.0	662.3	749.7	838.2	1310.4	1348.6	4216.2	11088.0	11651.9	11135.0	9290.3
72.5°	490.7	501.6	582.5	763.9	989.0	927.8	1455.7	8221.5	9241.1	10491.3	8808.3
75°	346.4	351.9	409.8	642.6	737.7	675.4	743.1	4250.1	5557.1	8043.4	7209.5
77.5°	266.7	276.4	310.4	449.2	726.7	474.3	454.6	1471.0	2260.0	4858.8	4943.0
80°	144.2	161.7	224.1	324.6	510.3	335.5	225.1	585.8	766.1	2272.0	1905.9
82.5°	74.3	83.0	156.3	233.9	290.7	292.8	111.5	243.7	315.8	701.6	261.2
85°	29.5	36.1	105.0	128.9	149.8	144.2	50.2	98.4	113.7	194.5	79.7
87.5°	6.6	11.0	38.2	29.5	28.4	30.6	12.0	23.0	21.8	23.0	14.2
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°	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5	1960.5
2.5°	1972.6	1968.2	1956.2	1943.1	1927.8	1919.0	1913.6	1912.4	1904.9	1899.3	1904.9
5°	2005.4	2001.0	1978.0	1950.8	1921.3	1898.3	1876.4	1856.8	1828.3	1822.9	1820.7
7.5°	2070.9	2058.9	2021.8	1984.6	1928.8	1862.2	1781.3	1688.5	1605.4	1580.2	1568.2
10°	2151.8	2135.4	2088.4	2022.8	1899.3	1718.0	1522.3	1340.9	1196.7	1156.2	1140.9
12.5°	2243.6	2229.4	2167.2	2045.8	1775.9	1446.9	1147.5	922.4	782.5	747.5	737.7
15°	2352.9	2332.2	2245.8	2010.8	1555.1	1099.4	787.9	654.6	604.3	597.8	591.2
17.5°	2468.7	2434.9	2315.8	1885.2	1257.9	781.4	608.7	570.5	548.6	542.0	538.7
20°	2574.7	2531.0	2357.3	1695.0	939.8	608.7	545.3	520.2	500.5	492.9	488.5
22.5°	2680.8	2618.5	2357.3	1436.0	704.9	539.9	500.5	477.5	454.6	444.7	439.3
25°	2791.2	2708.0	2315.8	1147.5	567.2	495.1	457.9	432.8	413.1	401.1	396.7
27.5°	2898.2	2783.5	2220.7	874.3	504.9	455.7	418.6	394.5	376.0	367.2	367.2
30°	2999.9	2857.8	2087.3	663.4	464.4	417.5	382.5	361.7	343.2	334.5	335.5
32.5°	3137.5	2951.8	1945.2	544.3	429.5	381.4	349.7	330.0	313.6	307.1	307.1
35°	3328.8	3090.6	1822.9	534.4	400.0	351.9	320.2	301.7	285.3	279.7	279.7
37.5°	3599.8	3314.6	1758.4	599.9	376.0	325.6	296.1	276.4	261.2	256.9	255.7
40°	3934.3	3618.5	1793.3	665.5	359.6	302.7	274.3	254.6	241.5	236.1	234.9
42.5°	4330.9	3993.3	1986.8	715.9	348.6	283.0	253.6	231.6	222.9	220.8	220.8
45°	4786.6	4405.2	2283.0	769.4	331.2	264.4	232.8	216.4	209.8	208.7	207.7
47.5°	5304.7	4857.7	2626.2	836.0	313.6	247.0	216.4	205.4	200.0	197.8	197.8
50°	5818.3	5313.4	2979.1	873.2	299.4	230.6	203.3	194.5	190.1	189.1	189.1
52.5°	6356.0	5782.2	3264.3	838.2	287.4	217.5	192.3	185.8	181.4	180.3	180.3
55°	6868.5	6161.5	3313.5	711.5	263.4	204.4	180.3	177.0	171.6	171.6	170.5
57.5°	7310.0	6351.6	2965.9	522.3	239.3	184.7	168.3	165.0	160.6	159.6	158.5
60°	7715.5	6297.0	2289.5	351.9	213.1	165.0	153.0	150.8	146.5	140.9	139.9
62.5°	7943.9	6056.5	1566.1	229.5	186.9	144.2	135.5	134.4	124.5	113.7	111.5
65°	8030.3	5562.6	977.0	167.2	156.3	123.5	117.0	114.8	100.6	88.6	87.4
67.5°	7954.8	4749.5	492.9	132.2	123.5	102.7	96.1	96.1	86.3	75.4	74.3
70°	7653.2	3560.4	207.7	106.0	95.1	78.7	78.7	83.0	73.2	61.2	60.1
72.5°	6998.6	2395.5	110.4	80.9	71.0	55.8	64.5	67.8	57.9	45.9	45.9
75°	5563.7	1461.1	76.5	60.1	44.8	39.4	49.2	51.4	39.4	30.6	29.5
77.5°	3805.3	839.3	51.4	38.2	28.4	23.0	33.9	31.7	20.8	14.2	15.3
80°	1671.0	349.7	29.5	17.5	11.0	8.7	12.0	8.7	6.6	4.4	4.4
82.5°	195.6	82.0	11.0	6.6	4.4	2.2	1.1	0.0	0.0	0.0	0.0
85°	40.4	9.8	5.4	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.7	2.2	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	0.0

(END OF REPORT)