

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: P195681

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7050-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195681  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL4-7050-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11922 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 124  
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: 25 FT

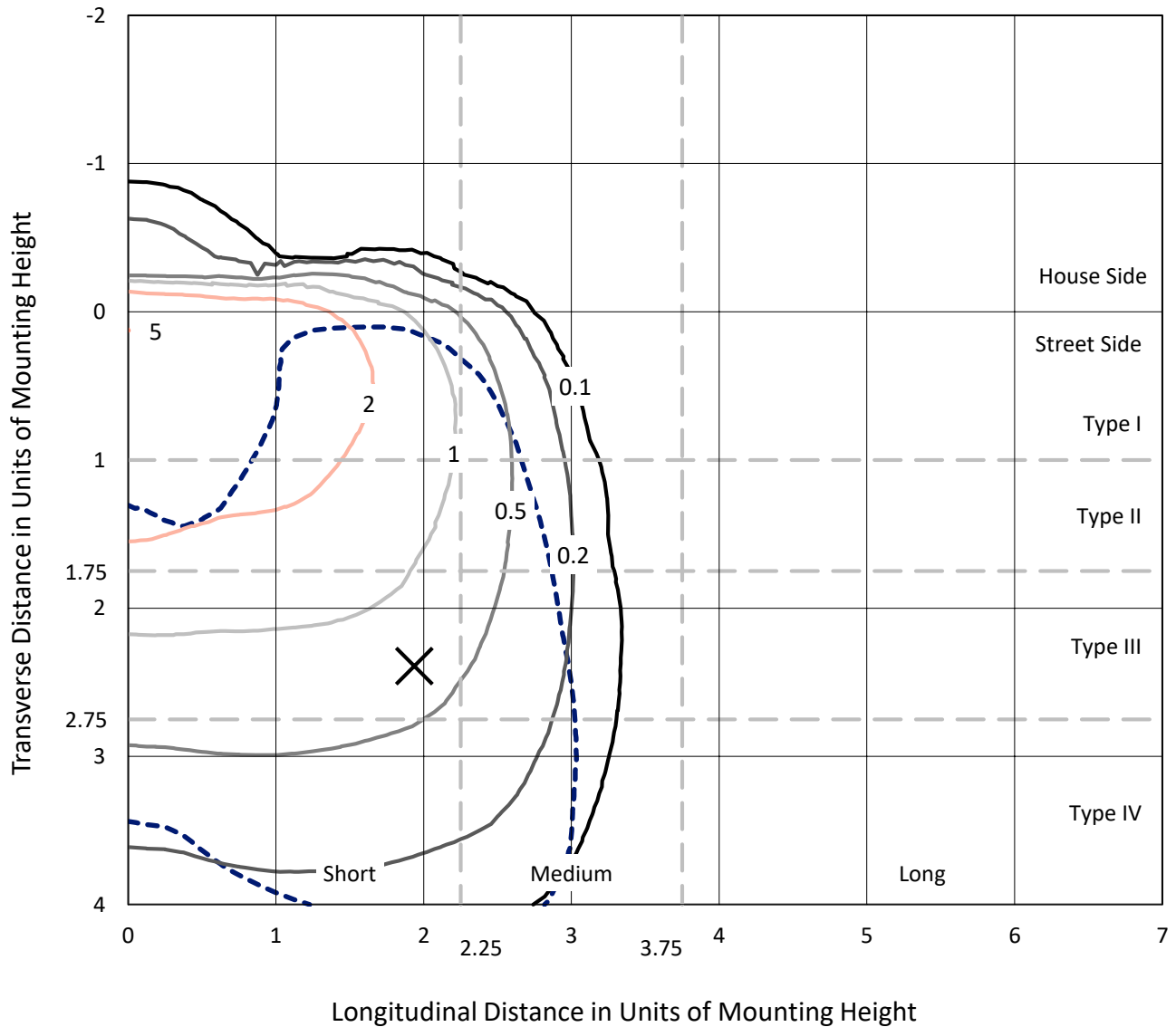


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

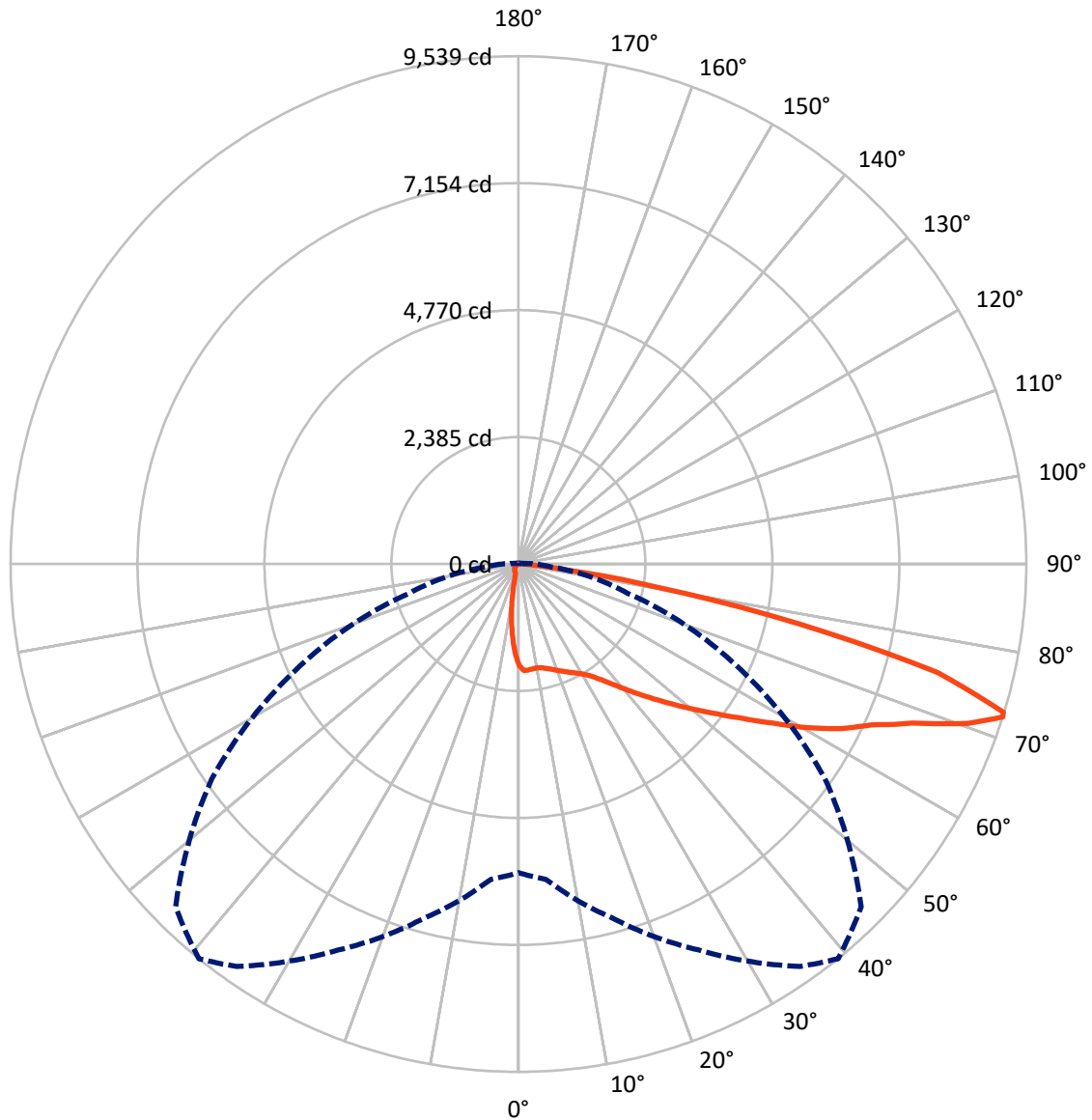


Based on 20 foot mounting height. Maximum calculated value = 5 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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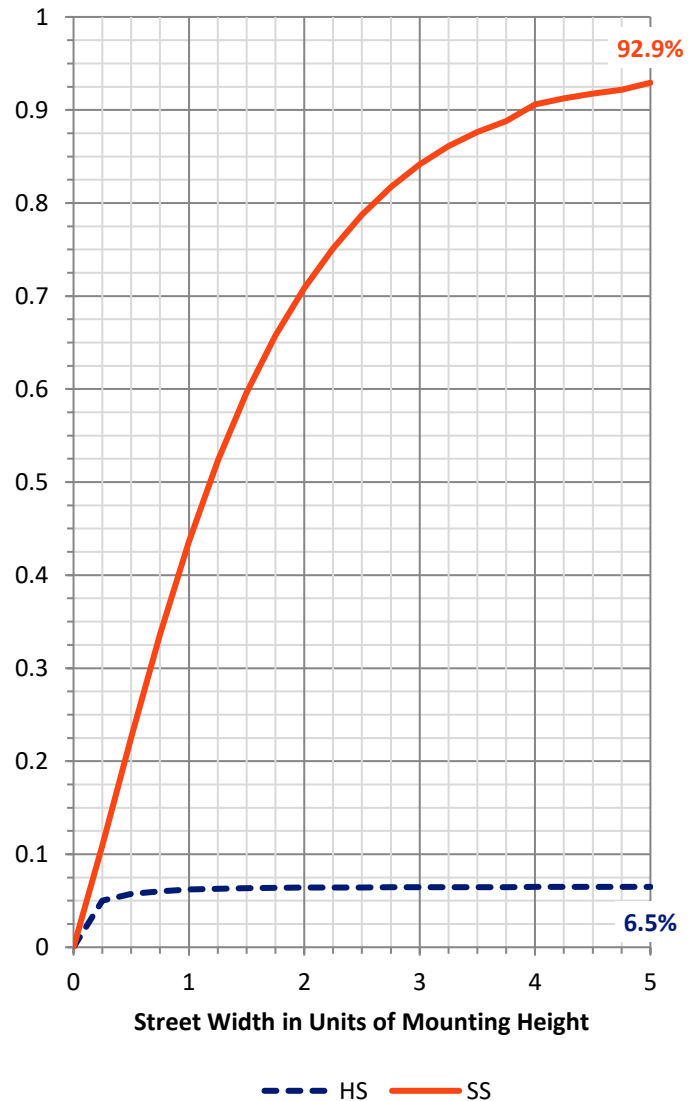
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	781.3	0.0	781.3
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	11140.7	0.0	11140.7
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	11922.0	0.0	11922.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.2	1.3
10°-20°	375.8	3.2
20°-30°	624.1	5.2
30°-40°	994.6	8.3
40°-50°	1641.8	13.8
50°-60°	2479.4	20.8
60°-70°	3229.8	27.1
70°-80°	2182.4	18.3
80°-90°	239.0	2.0
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°	11922.0	100.0
0°-180°	11922.0	100.0



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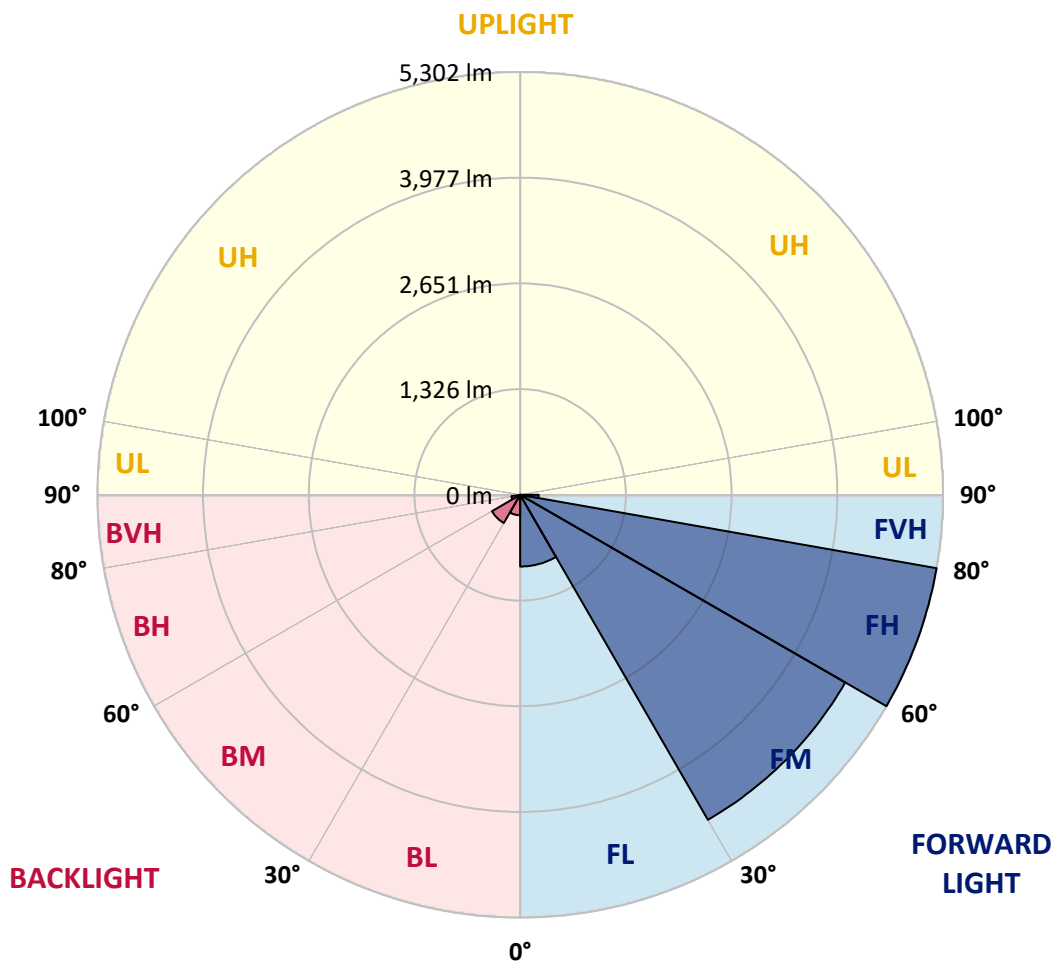
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	899.2	7.5			
FM	(30°-60°)	4707.0	39.5			
FH	(60°-80°)	5302.4	44.5			G3/7500
FVH	(80°-90°)	232.1	1.9			G3/500
BL	(0°-30°)	255.8	2.1	B1/500		
BM	(30°-60°)	408.8	3.4	B1/1000		
BH	(60°-80°)	109.8	0.9	B0/110		G0/110
BVH	(80°-90°)	6.9	0.1			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2
2.5°	2031.9	2035.7	2031.0	2022.5	2010.4	2002.9	1992.5	1970.1	1941.9	1917.6	1889.4
5°	2047.8	2049.7	2044.1	2028.2	2009.4	1999.1	1986.0	1961.6	1932.6	1898.8	1848.2
7.5°	2052.5	2051.6	2045.0	2025.3	1996.3	1983.2	1960.7	1930.7	1900.7	1869.8	1812.6
10°	2050.7	2050.7	2046.0	2027.2	1994.4	1982.2	1956.9	1925.1	1887.6	1856.6	1795.7
12.5°	2044.1	2047.8	2045.0	2034.7	2010.4	2001.0	1978.5	1946.6	1911.0	1879.1	1814.5
15°	2052.5	2058.1	2063.8	2060.0	2046.0	2037.5	2016.9	1984.1	1955.1	1921.3	1852.0
17.5°	2086.3	2098.5	2111.6	2112.5	2097.5	2082.5	2059.1	2025.3	1997.2	1966.3	1891.3
20°	2150.0	2159.4	2183.7	2188.4	2158.4	2136.9	2104.1	2064.7	2036.6	2010.4	1927.9
22.5°	2244.7	2255.0	2274.6	2268.1	2217.5	2192.2	2150.9	2105.9	2076.9	2061.9	1970.1
25°	2388.1	2390.9	2395.6	2366.5	2283.1	2255.0	2204.4	2153.7	2130.3	2128.4	2030.0
27.5°	2556.8	2560.5	2539.9	2475.2	2356.2	2319.6	2262.5	2216.5	2205.3	2219.4	2105.9
30°	2749.8	2750.8	2693.6	2588.6	2440.5	2400.2	2341.2	2290.6	2300.9	2335.6	2203.4
32.5°	2947.6	2938.2	2859.5	2722.6	2555.8	2507.1	2456.5	2405.9	2435.9	2506.1	2345.9
35°	3128.5	3124.7	3031.9	2872.6	2705.8	2662.7	2626.1	2572.7	2621.4	2735.8	2539.9
37.5°	3309.3	3306.5	3200.6	3034.7	2890.4	2859.5	2832.3	2791.1	2870.7	3038.5	2799.5
40°	3509.0	3504.3	3374.0	3214.7	3105.0	3088.2	3072.2	3054.4	3190.3	3423.7	3122.8
42.5°	3755.5	3734.8	3557.7	3410.6	3341.2	3345.9	3346.8	3364.6	3577.4	3882.0	3504.3
45°	4038.5	3992.6	3742.3	3620.5	3600.8	3628.9	3657.1	3731.1	4028.2	4409.7	3926.0
47.5°	4313.1	4239.1	3955.1	3846.4	3886.7	3944.8	4012.3	4156.6	4534.3	4961.7	4308.4
50°	4549.3	4473.4	4166.0	4076.0	4204.4	4290.6	4410.6	4629.0	5068.5	5428.4	4549.3
52.5°	4734.9	4674.9	4389.0	4329.0	4556.8	4674.9	4863.3	5150.1	5572.7	5735.8	4718.0
55°	4871.7	4841.7	4602.7	4611.2	4948.6	5119.1	5353.4	5677.7	5998.2	5974.8	4844.5
57.5°	5026.3	5002.9	4826.7	4943.9	5420.0	5640.2	5911.1	6171.6	6307.5	6167.0	4968.2
60°	5184.7	5192.2	5098.5	5346.9	6002.9	6246.6	6482.8	6547.5	6572.8	6361.9	5098.5
62.5°	5304.7	5336.6	5345.0	5781.8	6600.9	6809.0	6911.1	6865.2	6859.6	6623.4	5088.2
65°	5442.5	5525.9	5664.6	6258.8	7144.5	7281.3	7354.4	7421.0	7280.4	6701.2	4587.7
67.5°	5680.5	5811.7	6123.8	6843.6	7772.4	7974.9	8182.0	8111.7	7343.2	5911.1	3494.9
70°	6001.1	6161.3	6712.4	7607.5	8624.4	8963.6	9137.0	8056.4	6234.4	4084.4	1843.5
72°	5798.6	5943.9	6894.2	7997.4	9227.9	9539.1	9105.2	7027.3	4519.3	2117.2	617.6
72.5°	5601.8	5751.8	6836.1	7992.7	9287.9	9526.0	8898.0	6621.5	3999.1	1647.6	425.5
75°	3886.7	4076.0	5860.5	7184.8	8387.2	8125.8	6808.0	4009.5	1449.0	283.0	140.6
77.5°	2009.4	2155.6	3554.9	5077.0	5845.5	5353.4	4023.5	1739.5	401.1	150.0	92.8
80°	1245.6	1317.7	1662.6	2501.5	3036.6	2656.1	1775.1	702.9	256.8	89.0	74.0
82.5°	644.8	700.1	1046.9	1009.4	1121.9	932.5	655.1	588.6	158.4	55.3	75.9
85°	211.8	224.9	642.9	671.1	479.9	322.4	290.5	561.4	45.9	35.6	64.7
87.5°	28.1	32.8	225.9	384.3	236.2	146.2	174.3	197.8	15.9	19.7	17.8
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°	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2	1908.2
2.5°	1870.7	1858.5	1820.1	1781.7	1737.6	1697.3	1665.5	1644.8	1654.2	1623.3	1628.0
5°	1817.3	1786.4	1702.0	1611.1	1512.7	1420.8	1347.7	1293.4	1283.1	1236.2	1238.1
7.5°	1765.7	1715.1	1578.3	1428.3	1265.3	1133.1	1013.1	908.2	870.7	832.3	809.8
10°	1737.6	1668.3	1474.3	1255.9	1026.3	832.3	663.6	531.4	476.1	435.8	416.1
12.5°	1746.1	1654.2	1396.5	1099.4	797.6	551.1	374.9	278.4	244.6	225.9	219.3
15°	1774.2	1657.0	1326.2	946.6	580.1	333.7	220.2	188.4	185.6	184.6	183.7
17.5°	1800.4	1659.8	1252.1	787.3	388.0	212.8	177.1	174.3	174.3	174.3	174.3
20°	1827.6	1660.8	1170.6	620.4	254.9	174.3	166.8	165.0	166.8	166.8	166.8
22.5°	1859.5	1667.3	1091.9	458.3	188.4	164.0	159.3	158.4	159.3	159.3	158.4
25°	1898.8	1681.4	1006.6	328.0	170.6	157.5	152.8	151.8	152.8	151.8	151.8
27.5°	1951.3	1700.1	907.2	235.2	163.1	150.9	146.2	146.2	146.2	145.3	145.3
30°	2018.8	1722.6	774.1	185.6	155.6	144.3	140.6	140.6	139.6	138.7	138.7
32.5°	2115.3	1759.2	628.9	167.8	147.1	135.9	132.1	133.1	132.1	131.2	130.3
35°	2252.2	1816.3	485.5	158.4	138.7	127.5	123.7	123.7	123.7	121.8	121.8
37.5°	2446.2	1903.5	363.6	149.0	130.3	119.0	114.3	114.3	113.4	111.5	112.5
40°	2686.1	2013.2	263.4	140.6	121.8	109.7	105.9	104.0	102.2	100.3	100.3
42.5°	2974.8	2120.0	197.8	132.1	113.4	102.2	97.5	95.6	91.8	90.0	89.0
45°	3298.1	2233.4	164.0	121.8	104.0	93.7	90.0	86.2	81.5	78.7	77.8
47.5°	3570.8	2302.8	146.2	111.5	94.7	85.3	81.5	75.9	70.3	68.4	68.4
50°	3734.8	2273.7	131.2	101.2	85.3	76.9	72.2	64.7	60.9	59.0	58.1
52.5°	3826.7	2187.5	119.0	92.8	76.9	67.5	60.9	54.4	52.5	50.6	50.6
55°	3889.5	2062.8	105.9	84.4	69.4	59.0	51.5	46.9	45.0	44.0	43.1
57.5°	3949.5	1911.0	93.7	76.9	61.9	52.5	44.0	42.2	38.4	37.5	37.5
60°	3967.3	1702.0	82.5	68.4	55.3	45.9	38.4	35.6	31.9	30.9	30.9
62.5°	3740.5	1354.3	73.1	58.1	48.7	39.4	33.7	30.0	26.2	26.2	26.2
65°	3125.7	919.4	62.8	50.6	43.1	33.7	29.1	24.4	22.5	22.5	22.5
67.5°	2177.2	512.7	53.4	43.1	36.6	28.1	24.4	20.6	19.7	20.6	20.6
70°	981.3	203.4	45.0	35.6	30.0	23.4	20.6	17.8	19.7	19.7	19.7
72°	294.3	108.7	37.5	29.1	24.4	20.6	17.8	16.9	18.7	19.7	19.7
72.5°	218.4	97.5	35.6	28.1	24.4	19.7	16.9	16.9	18.7	19.7	19.7
75°	112.5	66.5	27.2	20.6	17.8	15.9	14.1	15.9	18.7	18.7	18.7
77.5°	88.1	54.4	22.5	15.9	15.0	14.1	13.1	15.0	16.9	16.9	16.9
80°	82.5	35.6	17.8	15.0	13.1	12.2	12.2	13.1	15.0	15.9	15.9
82.5°	83.4	29.1	15.9	14.1	12.2	11.2	11.2	12.2	14.1	15.0	15.0
85°	53.4	19.7	14.1	12.2	11.2	10.3	10.3	11.2	13.1	14.1	14.1
87.5°	17.8	15.0	12.2	11.2	9.4	9.4	9.4	9.4	11.2	12.2	13.1
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)