

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: P196634

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196634  
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-02-D-UNV-SL4-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 615mA 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: 6322.8 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 66  
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

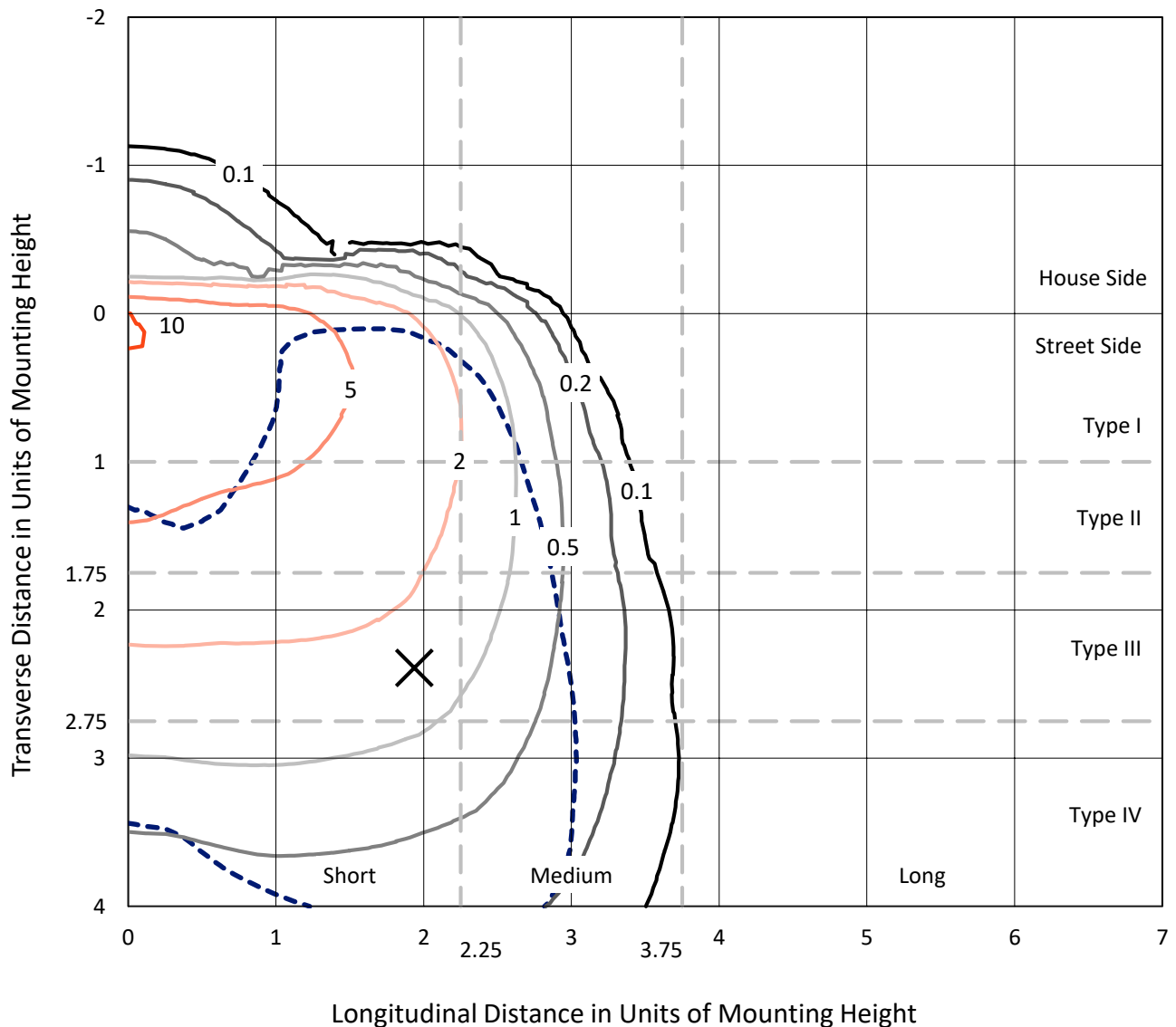


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

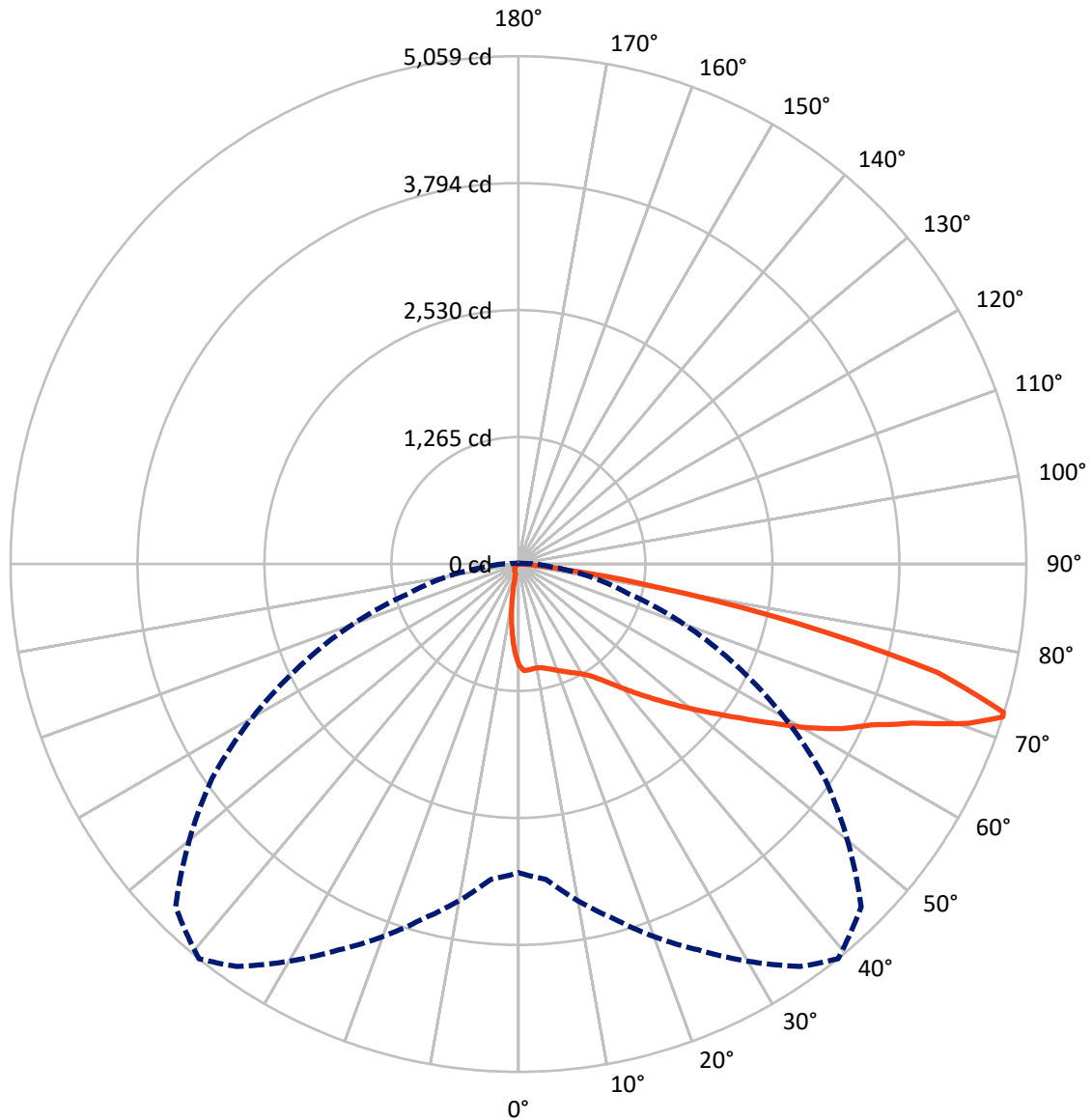


Based on 10 foot mounting height. Maximum calculated value = 10.6 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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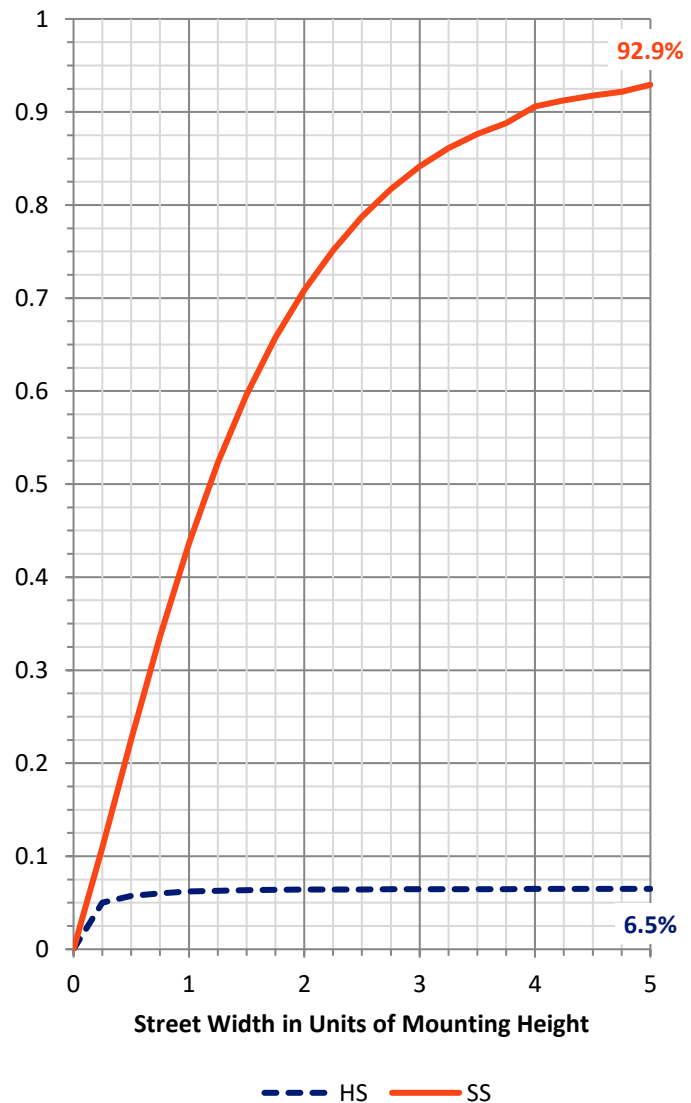
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	414.4	0.0	414.4
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	5908.4	0.0	5908.4
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	6322.8	0.0	6322.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.3	1.3
10°-20°	199.3	3.2
20°-30°	331.0	5.2
30°-40°	527.5	8.3
40°-50°	870.7	13.8
50°-60°	1314.9	20.8
60°-70°	1712.9	27.1
70°-80°	1157.4	18.3
80°-90°	126.7	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°	6322.8	100.0
0°-180°	6322.8	100.0



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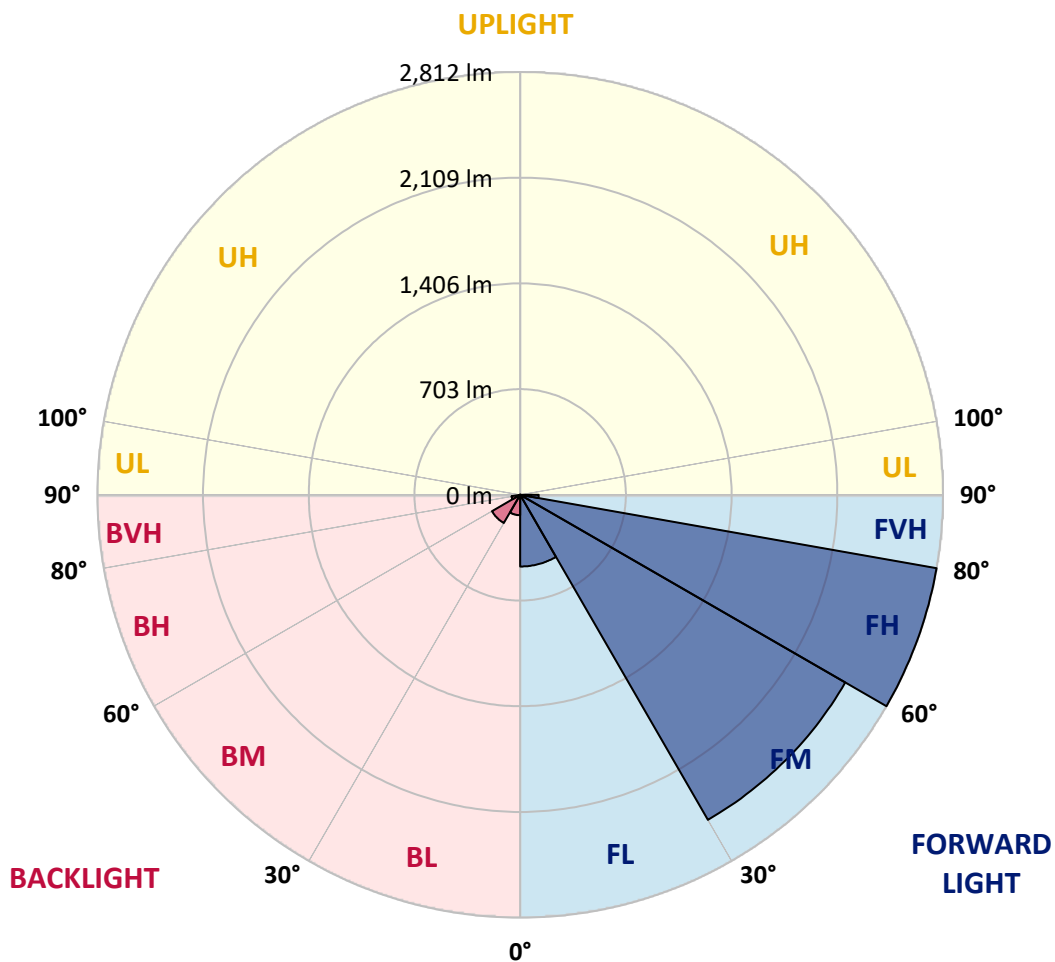
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	476.9	7.5			
FM	(30°-60°)	2496.3	39.5			
FH	(60°-80°)	2812.1	44.5			G2/5000
FVH	(80°-90°)	123.1	1.9			G2/225
BL	(0°-30°)	135.7	2.1	B1/500		
BM	(30°-60°)	216.8	3.4	B0/220		
BH	(60°-80°)	58.2	0.9	B0/110		G0/110
BVH	(80°-90°)	3.6	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0
2.5°	1077.7	1079.6	1077.1	1072.6	1066.2	1062.2	1056.7	1044.8	1029.9	1016.9	1002.0
5°	1086.0	1087.0	1084.1	1075.6	1065.8	1060.3	1053.3	1040.3	1025.0	1007.1	980.2
7.5°	1088.5	1088.1	1084.6	1074.1	1058.7	1051.7	1039.8	1024.0	1008.0	991.6	961.3
10°	1087.5	1087.5	1085.1	1075.1	1057.7	1051.3	1037.9	1020.9	1001.1	984.7	952.4
12.5°	1084.1	1086.0	1084.6	1079.2	1066.2	1061.2	1049.3	1032.4	1013.5	996.6	962.3
15°	1088.5	1091.5	1094.6	1092.5	1085.1	1080.6	1069.6	1052.2	1036.9	1019.0	982.2
17.5°	1106.5	1113.0	1119.9	1120.4	1112.4	1104.5	1092.0	1074.1	1059.3	1042.9	1003.1
20°	1140.2	1145.2	1158.1	1160.7	1144.7	1133.3	1115.9	1095.0	1080.1	1066.2	1022.4
22.5°	1190.5	1196.0	1206.3	1202.8	1176.0	1162.6	1140.7	1116.8	1101.5	1093.5	1044.8
25°	1266.6	1268.0	1270.4	1255.1	1210.8	1196.0	1169.1	1142.2	1129.8	1128.8	1076.6
27.5°	1356.0	1358.0	1347.0	1312.8	1249.6	1230.3	1199.8	1175.5	1169.6	1177.0	1116.8
30°	1458.4	1458.8	1428.6	1372.9	1294.2	1273.0	1241.6	1214.9	1220.3	1238.7	1168.6
32.5°	1563.3	1558.2	1516.5	1444.0	1355.5	1329.5	1302.8	1275.9	1291.9	1329.1	1244.1
35°	1659.2	1657.3	1608.0	1523.5	1435.0	1412.1	1392.7	1364.4	1390.4	1451.0	1347.0
37.5°	1755.1	1753.6	1697.5	1609.5	1532.9	1516.5	1502.1	1480.3	1522.5	1611.5	1484.8
40°	1861.0	1858.5	1789.4	1704.9	1646.7	1637.8	1629.4	1619.9	1692.0	1815.8	1656.2
42.5°	1991.7	1980.8	1886.8	1808.8	1771.9	1774.5	1775.0	1784.4	1897.3	2058.8	1858.5
45°	2141.8	2117.5	1984.8	1920.1	1909.8	1924.6	1939.6	1978.8	2136.3	2338.7	2082.2
47.5°	2287.5	2248.2	2097.6	2040.0	2061.2	2092.1	2128.0	2204.5	2404.8	2631.4	2284.9
50°	2412.8	2372.4	2209.4	2161.7	2229.8	2275.6	2339.1	2454.9	2688.1	2879.0	2412.8
52.5°	2511.1	2479.3	2327.8	2295.9	2416.7	2479.3	2579.3	2731.4	2955.5	3042.0	2502.1
55°	2583.7	2567.8	2441.1	2445.5	2624.5	2715.0	2839.2	3011.1	3181.2	3168.7	2569.3
57.5°	2665.7	2653.3	2559.8	2622.0	2874.5	2991.3	3134.9	3273.1	3345.2	3270.6	2634.9
60°	2749.7	2753.7	2703.9	2835.8	3183.7	3312.8	3438.2	3472.5	3485.9	3374.0	2703.9
62.5°	2813.3	2830.3	2834.7	3066.4	3500.7	3611.1	3665.3	3640.9	3638.0	3512.6	2698.4
65°	2886.4	2930.7	3004.2	3319.4	3789.1	3861.7	3900.4	3935.7	3861.1	3553.9	2433.1
67.5°	3012.8	3082.2	3247.7	3629.5	4122.2	4229.4	4339.3	4302.1	3894.4	3134.9	1853.6
70°	3182.6	3267.6	3559.8	4034.6	4573.9	4753.9	4845.8	4272.7	3306.4	2166.2	977.8
72°	3075.3	3152.3	3656.4	4241.5	4894.0	5059.0	4828.9	3727.0	2396.8	1122.8	327.6
72.5°	2970.9	3050.4	3625.6	4238.9	4925.9	5052.1	4719.0	3511.7	2120.9	873.8	225.6
75°	2061.2	2161.7	3108.1	3810.4	4448.2	4309.5	3610.6	2126.4	768.4	150.1	74.6
77.5°	1065.8	1143.2	1885.4	2692.5	3100.1	2839.2	2133.9	922.5	212.7	79.5	49.1
80°	660.6	698.8	881.8	1326.6	1610.5	1408.7	941.4	372.8	136.2	47.2	39.3
82.5°	342.0	371.3	555.2	535.4	595.0	494.6	347.5	312.2	84.0	29.3	40.2
85°	112.3	119.3	341.0	355.8	254.5	171.0	154.0	297.7	24.4	18.9	34.3
87.5°	14.9	17.4	119.7	203.8	125.2	77.6	92.5	104.9	8.4	10.5	9.4
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°	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0	1012.0
2.5°	992.1	985.6	965.3	944.9	921.5	900.2	883.3	872.3	877.4	860.9	863.3
5°	963.7	947.4	902.7	854.4	802.3	753.6	714.8	685.9	680.4	655.7	656.6
7.5°	936.5	909.6	837.0	757.5	671.1	600.9	537.3	481.7	461.7	441.4	429.5
10°	921.5	884.8	781.9	666.1	544.3	441.4	352.0	281.8	252.5	231.1	220.7
12.5°	926.0	877.4	740.7	583.0	423.0	292.3	198.9	147.6	129.7	119.7	116.4
15°	940.9	878.8	703.3	502.0	307.7	177.0	116.8	99.9	98.5	97.9	97.5
17.5°	954.8	880.3	664.1	417.5	205.7	112.9	94.0	92.5	92.5	92.5	92.5
20°	969.2	880.7	620.8	329.1	135.2	92.5	88.5	87.5	88.5	88.5	88.5
22.5°	986.2	884.2	579.1	243.1	99.9	87.0	84.4	84.0	84.4	84.4	84.0
25°	1007.1	891.8	533.8	173.9	90.4	83.5	81.1	80.6	81.1	80.6	80.6
27.5°	1034.9	901.7	481.2	124.8	86.6	80.0	77.6	77.6	77.6	77.0	77.0
30°	1070.6	913.6	410.6	98.5	82.5	76.6	74.6	74.6	74.1	73.5	73.5
32.5°	1121.9	933.0	333.6	88.9	78.0	72.1	70.0	70.6	70.0	69.6	69.1
35°	1194.4	963.3	257.6	84.0	73.5	67.6	65.7	65.7	65.7	64.6	64.6
37.5°	1297.4	1009.5	192.9	79.0	69.1	63.2	60.6	60.6	60.1	59.1	59.6
40°	1424.5	1067.7	139.7	74.6	64.6	58.1	56.2	55.1	54.2	53.2	53.2
42.5°	1577.7	1124.4	104.9	70.0	60.1	54.2	51.7	50.7	48.7	47.7	47.2
45°	1749.1	1184.5	87.0	64.6	55.1	49.7	47.7	45.8	43.2	41.7	41.3
47.5°	1893.8	1221.3	77.6	59.1	50.1	45.3	43.2	40.2	37.2	36.3	36.3
50°	1980.8	1205.9	69.6	53.6	45.3	40.8	38.2	34.3	32.3	31.3	30.8
52.5°	2029.5	1160.2	63.2	49.1	40.8	35.8	32.3	28.9	27.9	26.9	26.9
55°	2062.9	1094.0	56.2	44.7	36.8	31.3	27.4	24.8	23.8	23.4	22.8
57.5°	2094.6	1013.5	49.7	40.8	32.8	27.9	23.4	22.4	20.4	19.8	19.8
60°	2104.0	902.7	43.7	36.3	29.3	24.4	20.4	18.9	16.9	16.4	16.4
62.5°	1983.7	718.3	38.8	30.8	25.9	20.9	17.9	16.0	13.8	13.8	13.8
65°	1657.7	487.7	33.4	26.9	22.8	17.9	15.4	12.9	11.9	11.9	11.9
67.5°	1154.7	271.8	28.3	22.8	19.3	14.9	12.9	10.9	10.5	10.9	10.9
70°	520.4	107.8	23.8	18.9	16.0	12.4	10.9	9.4	10.5	10.5	10.5
72°	156.0	57.7	19.8	15.4	12.9	10.9	9.4	9.0	10.0	10.5	10.5
72.5°	115.9	51.7	18.9	14.9	12.9	10.5	9.0	9.0	10.0	10.5	10.5
75°	59.6	35.3	14.4	10.9	9.4	8.4	7.4	8.4	10.0	10.0	10.0
77.5°	46.8	28.9	11.9	8.4	7.9	7.4	7.0	7.9	9.0	9.0	9.0
80°	43.7	18.9	9.4	7.9	7.0	6.4	6.4	7.0	7.9	8.4	8.4
82.5°	44.2	15.4	8.4	7.4	6.4	6.0	6.0	6.4	7.4	7.9	7.9
85°	28.3	10.5	7.4	6.4	6.0	5.5	5.5	6.0	7.0	7.4	7.4
87.5°	9.4	7.9	6.4	6.0	4.9	4.9	4.9	4.9	6.0	6.4	7.0
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)