

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: P270442

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270442  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9892.3 lumens  
Efficiency: N/A  
Efficacy: 103.0 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

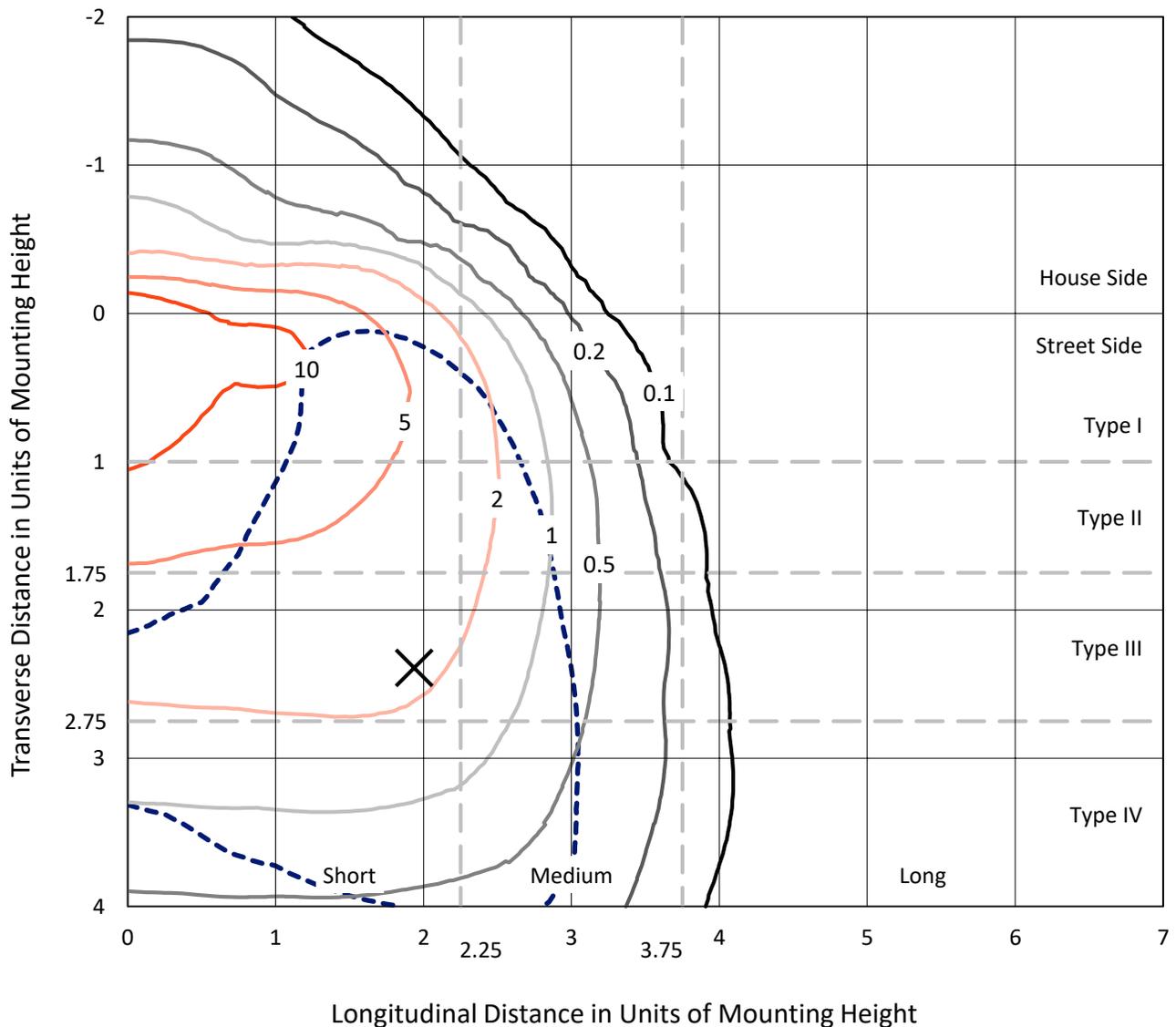
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

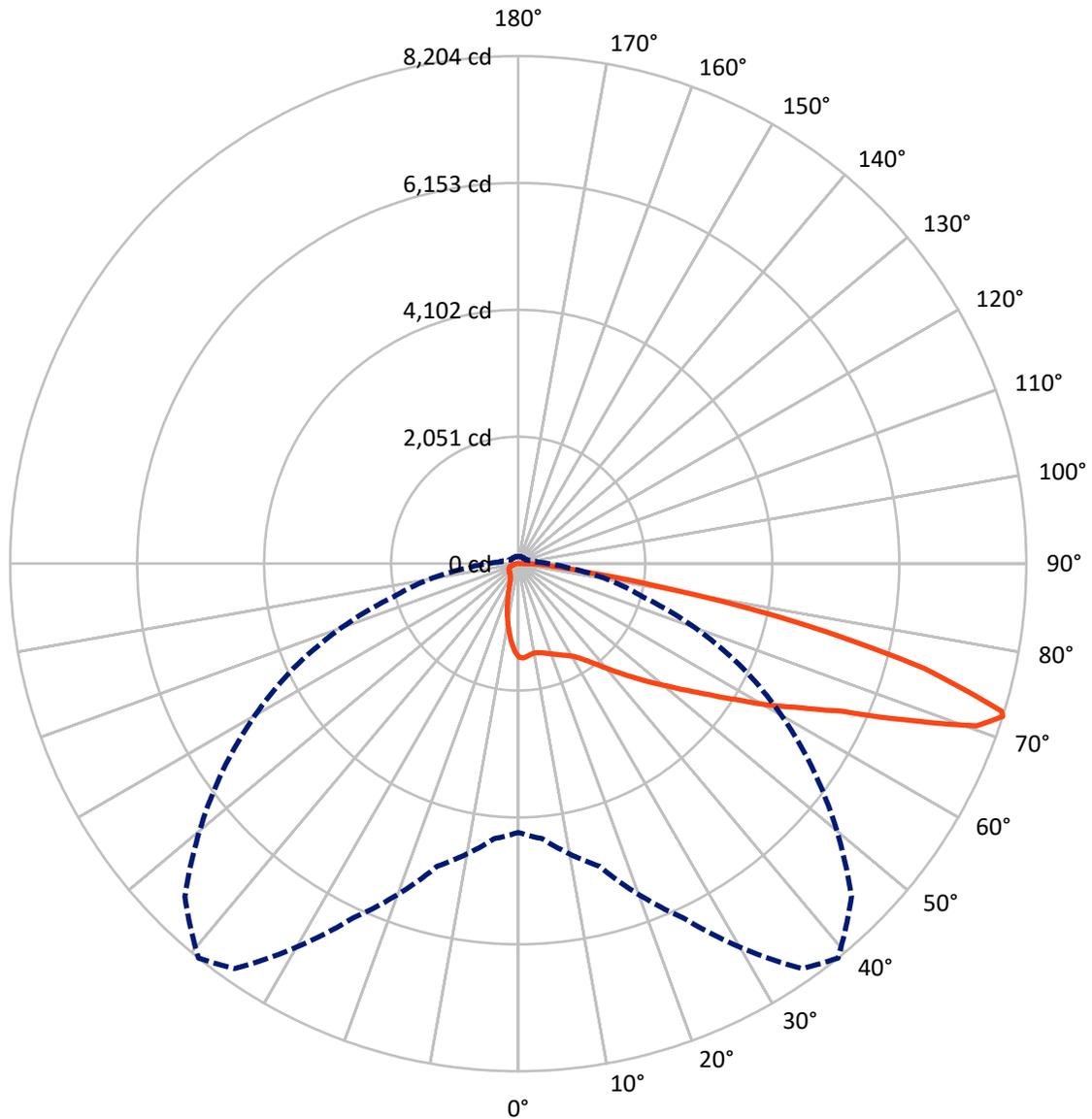
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.1 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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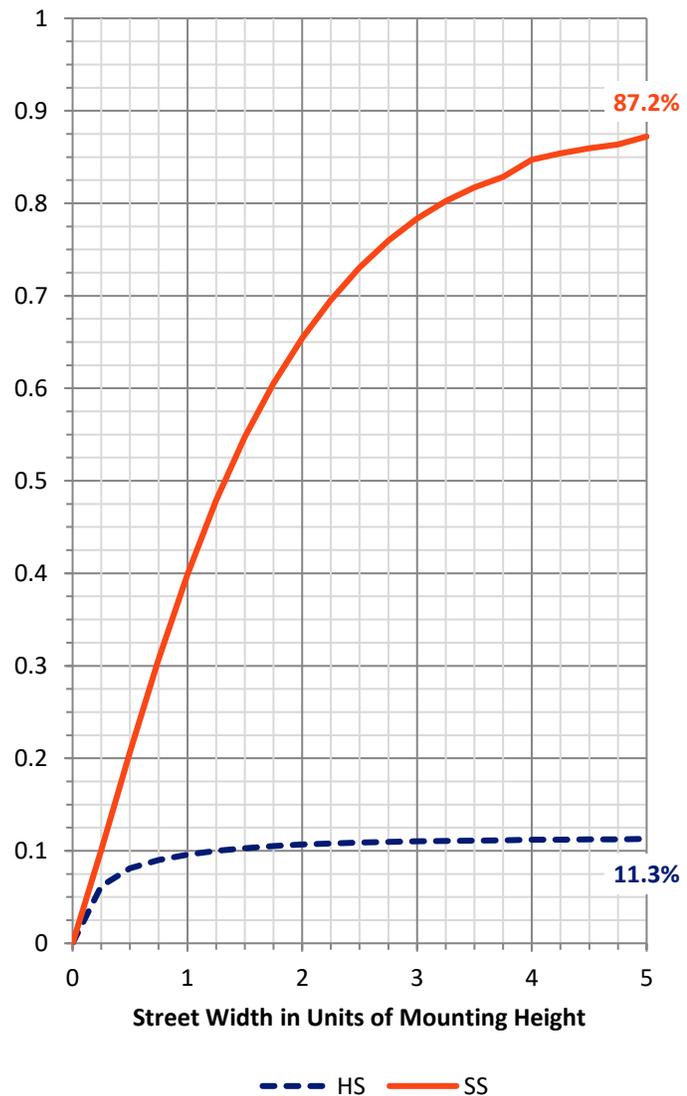
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1134.3	0.0	1134.3
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	8758.1	0.0	8758.1
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	9892.3	0.0	9892.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.8	1.3
10°-20°	326.2	3.3
20°-30°	508.4	5.1
30°-40°	782.8	7.9
40°-50°	1276.1	12.9
50°-60°	1982.9	20.0
60°-70°	2654.0	26.8
70°-80°	1908.6	19.3
80°-90°	323.6	3.3
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°	9892.3	100.0
0°-180°	9892.3	100.0



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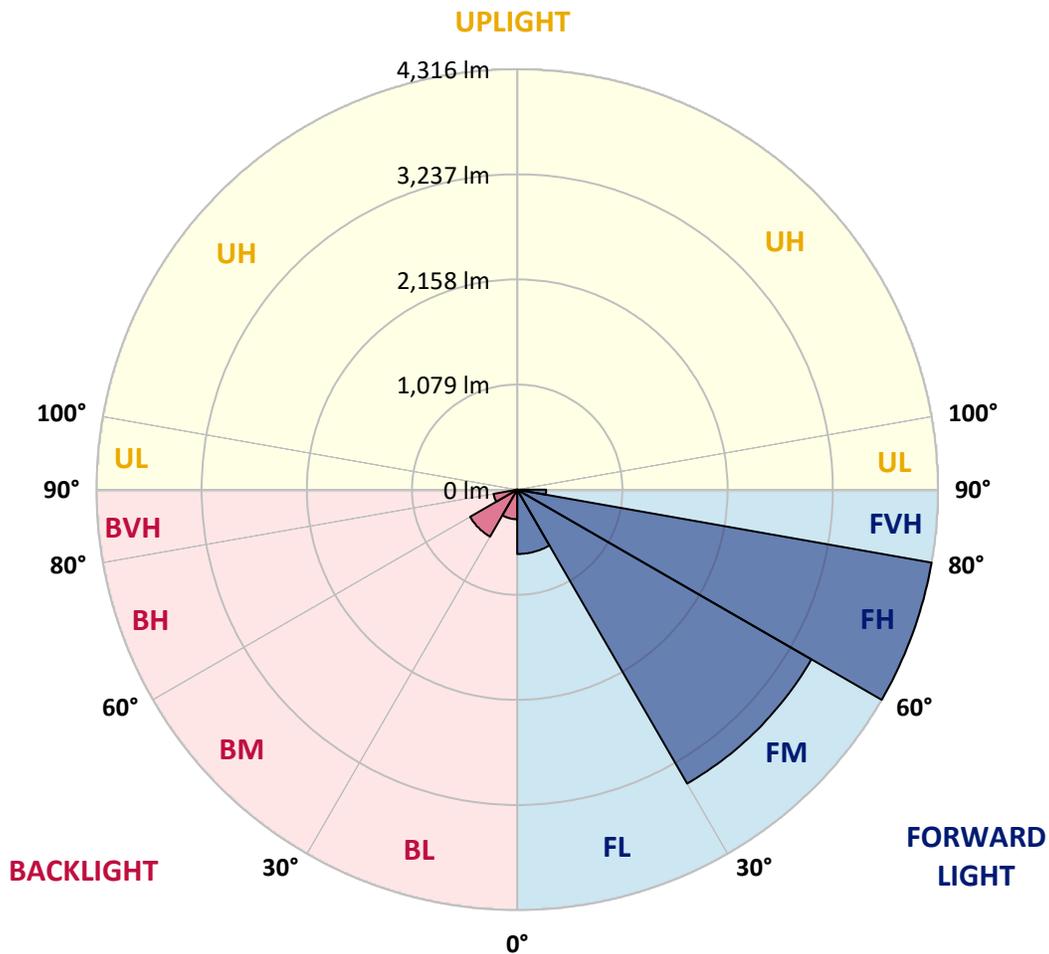
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	660.8	6.7			
FM	(30°-60°)	3484.3	35.2			
FH	(60°-80°)	4316.2	43.6			G2/5000
FVH	(80°-90°)	296.8	3.0			G3/500
BL	(0°-30°)	303.6	3.1	B1/500		
BM	(30°-60°)	557.4	5.6	B1/1000		
BH	(60°-80°)	246.4	2.5	B1/500		G1/500
BVH	(80°-90°)	26.7	0.3			G1/100
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°	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7
2.5°	1543.3	1543.9	1541.9	1536.0	1530.6	1527.9	1523.3	1515.4	1504.8	1497.5	1491.5
5°	1528.6	1530.6	1529.4	1519.4	1510.1	1504.8	1497.5	1486.2	1472.2	1466.3	1452.3
7.5°	1517.3	1518.8	1514.7	1503.5	1485.4	1478.9	1465.6	1451.0	1438.4	1429.7	1413.2
10°	1509.4	1510.7	1507.4	1496.1	1476.3	1468.2	1452.3	1436.4	1419.9	1409.1	1390.5
12.5°	1498.2	1500.8	1500.8	1495.5	1482.3	1476.9	1461.0	1443.7	1428.3	1417.0	1393.9
15°	1496.1	1499.5	1505.4	1504.8	1500.8	1496.8	1484.2	1466.9	1453.6	1440.3	1411.7
17.5°	1512.7	1520.0	1532.0	1536.0	1533.2	1524.8	1510.1	1494.2	1479.5	1466.9	1431.7
20°	1554.5	1558.6	1576.4	1584.4	1571.1	1558.6	1539.2	1518.8	1505.4	1495.5	1450.4
22.5°	1617.7	1623.0	1637.6	1638.1	1610.3	1595.1	1570.4	1545.3	1532.7	1528.6	1475.6
25°	1718.5	1717.3	1721.2	1704.7	1654.1	1636.3	1606.3	1577.2	1568.5	1576.4	1512.7
27.5°	1839.5	1836.1	1823.5	1780.4	1703.9	1680.8	1644.8	1618.9	1618.9	1637.6	1563.2
30°	1978.8	1975.6	1934.4	1862.0	1763.1	1736.6	1698.7	1671.4	1685.4	1721.2	1631.6
32.5°	2126.3	2114.4	2056.6	1959.7	1847.5	1818.2	1781.7	1753.9	1780.4	1841.4	1729.9
35°	2265.2	2258.5	2187.5	2072.5	1956.2	1931.7	1906.6	1872.0	1914.5	2009.5	1868.7
37.5°	2408.5	2403.2	2316.2	2194.1	2089.2	2072.5	2051.3	2027.4	2095.7	2220.6	2056.6
40°	2568.7	2558.0	2448.4	2326.3	2243.8	2235.9	2224.7	2217.9	2328.1	2514.1	2294.4
42.5°	2749.9	2729.3	2587.8	2471.6	2412.6	2419.1	2413.1	2439.7	2608.4	2852.7	2577.1
45°	2957.1	2915.9	2726.6	2626.4	2599.2	2625.7	2638.3	2706.1	2939.9	3243.9	2893.4
47.5°	3151.0	3097.9	2878.7	2794.4	2809.7	2855.4	2891.4	3010.8	3303.1	3630.4	3216.0
50°	3329.6	3269.8	3041.4	2968.4	3042.6	3107.7	3182.2	3350.9	3689.5	4028.2	3512.3
52.5°	3461.8	3418.6	3204.2	3158.4	3310.3	3396.8	3515.5	3728.8	4080.0	4407.4	3776.6
55°	3564.0	3540.8	3362.9	3376.1	3613.2	3736.7	3880.8	4125.8	4493.1	4747.4	3989.1
57.5°	3682.2	3664.9	3544.2	3639.0	3989.1	4144.4	4314.4	4586.7	4886.2	5046.9	4155.6
60°	3807.0	3807.0	3745.9	3955.9	4459.1	4637.1	4806.6	5018.3	5277.9	5316.4	4223.4
62.5°	3901.3	3926.0	3947.8	4293.2	4905.5	5126.5	5312.4	5515.8	5683.7	5449.3	4064.0
65°	4038.2	4090.6	4214.0	4683.0	5457.9	5747.4	5998.4	6169.1	6012.4	5343.7	3544.2
67.5°	4273.2	4350.9	4614.0	5263.3	6303.9	6737.6	6981.3	6686.4	5947.9	4679.0	2714.7
70°	4485.1	4594.7	5044.3	5999.8	7403.7	7853.8	7741.7	6566.3	5180.3	3429.9	1670.0
72°	4344.4	4463.8	5064.1	6320.6	7991.3	8203.9	7612.1	5819.2	4002.9	2093.1	823.4
72.5°	4251.9	4376.2	4999.7	6312.6	8007.2	8159.3	7432.1	5522.3	3633.7	1831.5	666.1
75°	3552.1	3658.3	4299.1	5594.7	7056.4	6777.4	5799.8	3573.9	1670.0	591.7	342.7
77.5°	2319.6	2400.6	2964.3	3876.1	4942.7	4674.3	3530.2	1673.5	626.2	359.2	257.6
80°	1165.5	1223.2	1586.4	2038.1	2667.5	2454.3	1629.6	809.6	419.0	259.6	202.6
82.5°	810.8	863.9	1092.3	1040.5	1114.9	1079.1	766.3	675.3	313.5	164.0	106.3
85°	679.9	735.2	903.8	741.8	607.0	553.1	549.1	638.2	207.1	80.9	89.7
87.5°	593.1	676.7	745.8	541.9	416.4	367.2	404.3	585.1	65.8	44.5	27.2
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°	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7	1510.7
2.5°	1481.6	1479.5	1469.5	1454.3	1442.9	1435.8	1421.7	1421.1	1422.5	1410.5	1415.1
5°	1439.7	1431.7	1405.8	1370.6	1342.1	1314.8	1284.9	1275.1	1266.4	1248.5	1250.4
7.5°	1395.8	1382.0	1336.8	1278.9	1223.9	1173.4	1123.6	1099.0	1080.4	1057.1	1057.1
10°	1369.9	1348.0	1278.9	1194.7	1107.0	1033.3	958.9	914.5	881.9	852.0	849.9
12.5°	1368.7	1335.4	1239.1	1122.9	1002.8	899.2	797.5	729.2	680.6	645.4	642.2
15°	1379.3	1332.7	1206.0	1055.9	904.5	769.7	644.2	557.2	495.3	456.2	452.2
17.5°	1388.6	1329.4	1170.1	985.5	808.8	644.9	505.3	415.0	356.5	324.7	321.5
20°	1397.1	1322.1	1124.3	911.2	703.3	527.9	395.2	322.0	283.5	265.5	263.7
22.5°	1409.8	1315.5	1076.4	827.3	599.7	429.7	326.1	273.7	253.1	244.3	243.0
25°	1430.5	1316.1	1029.9	741.8	504.7	358.0	282.2	249.6	238.4	232.4	232.4
27.5°	1460.3	1324.1	984.2	654.8	424.3	308.7	256.3	237.1	229.7	225.1	223.8
30°	1504.1	1338.7	935.7	572.4	360.6	274.9	241.0	229.1	223.0	219.1	218.5
32.5°	1567.8	1364.6	884.6	497.4	312.2	251.0	229.7	222.5	217.7	214.4	213.8
35°	1662.9	1410.5	834.7	433.6	277.5	233.7	220.4	214.4	211.8	210.6	209.8
37.5°	1802.3	1484.2	787.5	383.8	254.9	222.5	211.2	207.9	206.5	206.5	206.5
40°	1977.6	1581.1	745.1	348.6	242.5	213.8	204.5	201.8	201.8	202.6	202.6
42.5°	2190.7	1702.6	708.6	324.7	235.0	207.9	200.0	198.5	197.8	197.8	198.5
45°	2438.4	1846.0	685.9	306.1	229.7	204.5	196.5	195.9	193.2	191.9	191.9
47.5°	2687.5	1999.4	684.7	295.5	223.0	200.5	193.2	193.2	187.9	185.3	185.9
50°	2919.9	2137.0	699.3	292.8	219.1	194.6	189.9	190.6	183.3	180.0	179.3
52.5°	3107.1	2241.9	717.1	296.3	219.1	189.3	184.0	187.2	179.3	175.3	174.6
55°	3252.0	2314.9	723.9	303.4	221.8	184.6	178.7	184.0	178.0	172.7	172.7
57.5°	3355.4	2338.2	695.3	306.9	225.7	184.0	173.4	183.3	180.0	173.4	173.4
60°	3317.6	2203.4	589.0	294.1	225.1	182.6	169.3	184.6	186.6	179.3	179.3
62.5°	3022.2	1843.4	472.8	265.5	213.8	178.0	164.7	183.3	191.2	188.6	187.2
65°	2460.4	1351.9	366.6	231.8	194.6	168.1	154.7	171.3	180.6	183.3	184.0
67.5°	1733.9	855.9	284.9	197.2	170.7	153.4	143.4	151.5	154.7	156.0	158.7
70°	948.3	463.5	226.5	165.9	146.1	138.8	131.5	132.1	130.9	129.4	130.9
72°	476.1	302.8	191.2	144.1	129.4	124.9	121.5	119.6	119.6	117.6	118.1
72.5°	409.7	281.6	184.6	138.8	125.6	121.5	118.8	116.9	116.2	115.0	115.5
75°	272.9	223.0	154.1	116.2	106.9	104.3	105.6	103.6	104.3	102.9	103.6
77.5°	220.4	191.9	130.9	98.3	91.6	87.7	90.3	91.0	92.3	91.0	90.3
80°	184.6	163.3	109.6	80.9	76.4	73.0	74.4	79.1	79.7	75.6	75.1
82.5°	119.6	131.5	86.3	63.2	58.4	57.1	60.5	65.0	66.5	61.1	59.7
85°	100.3	105.6	62.4	43.2	38.4	37.2	43.8	48.5	51.8	46.5	45.2
87.5°	27.8	51.8	30.5	20.7	17.2	17.2	21.3	25.2	29.9	30.5	30.5
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)