

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: P146604

Luminaire Tested: **LDRL-T3-F03-E-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146604  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-T3-F03-E-7030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (21) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6753.8 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

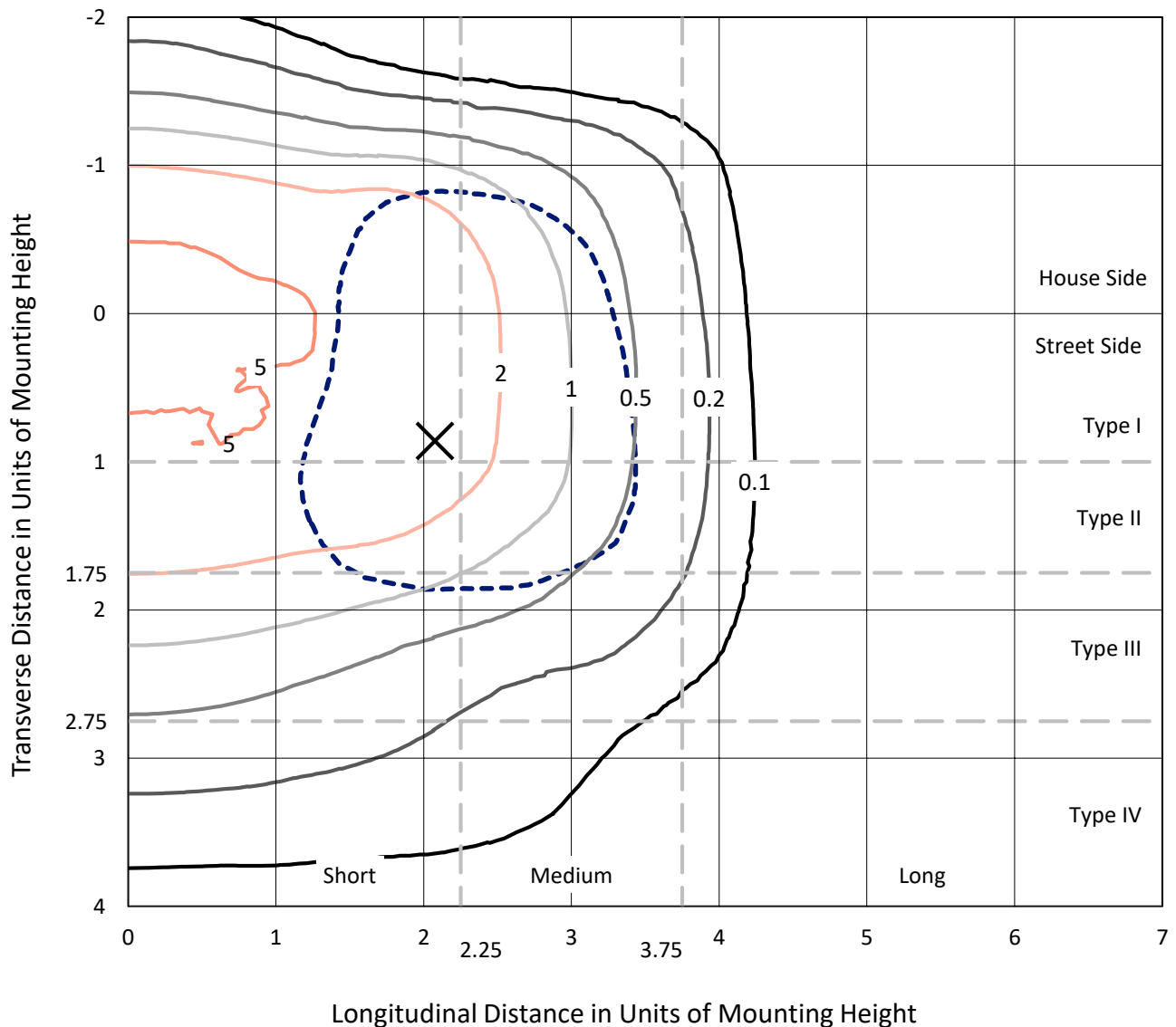
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

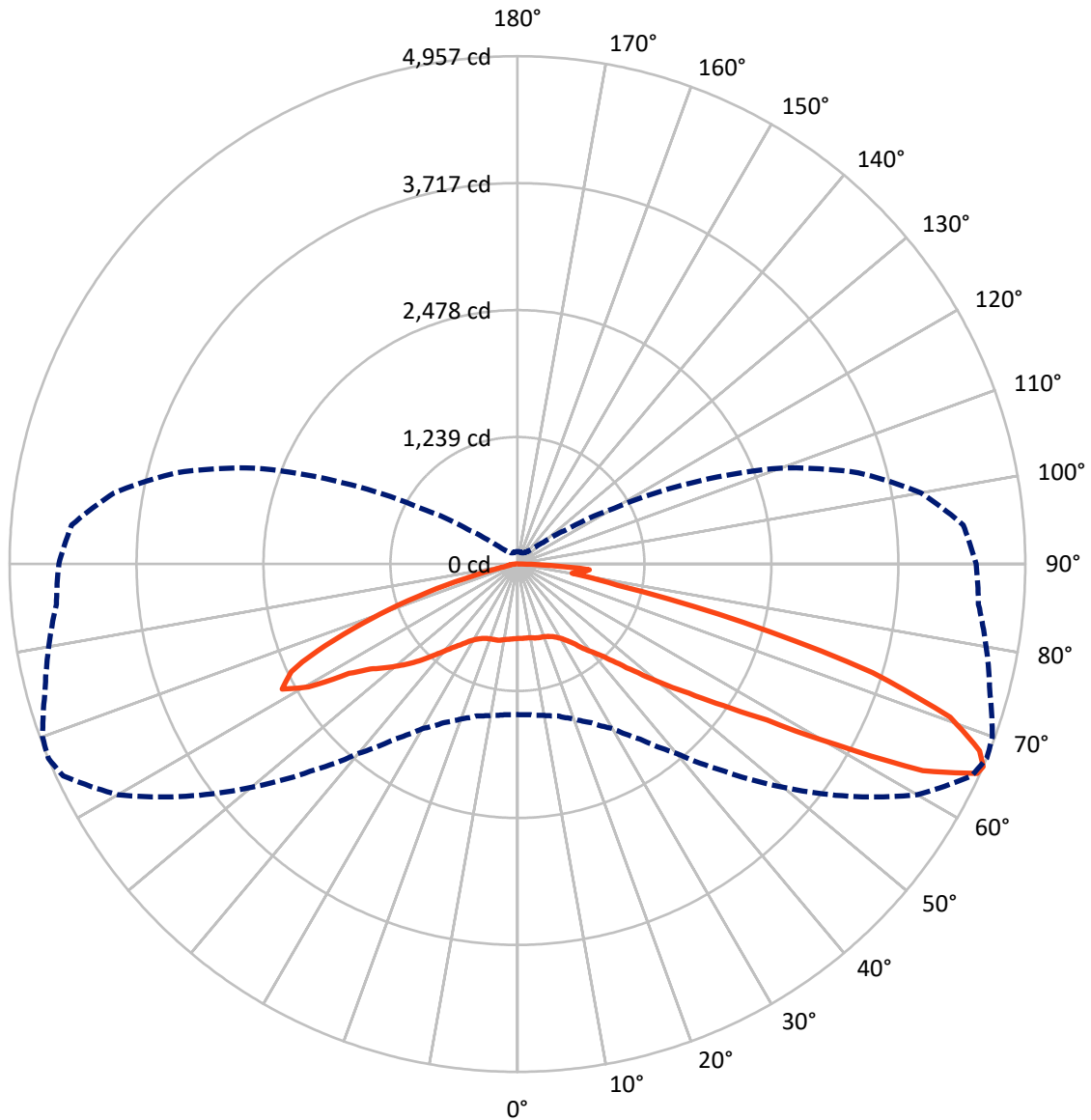
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.3 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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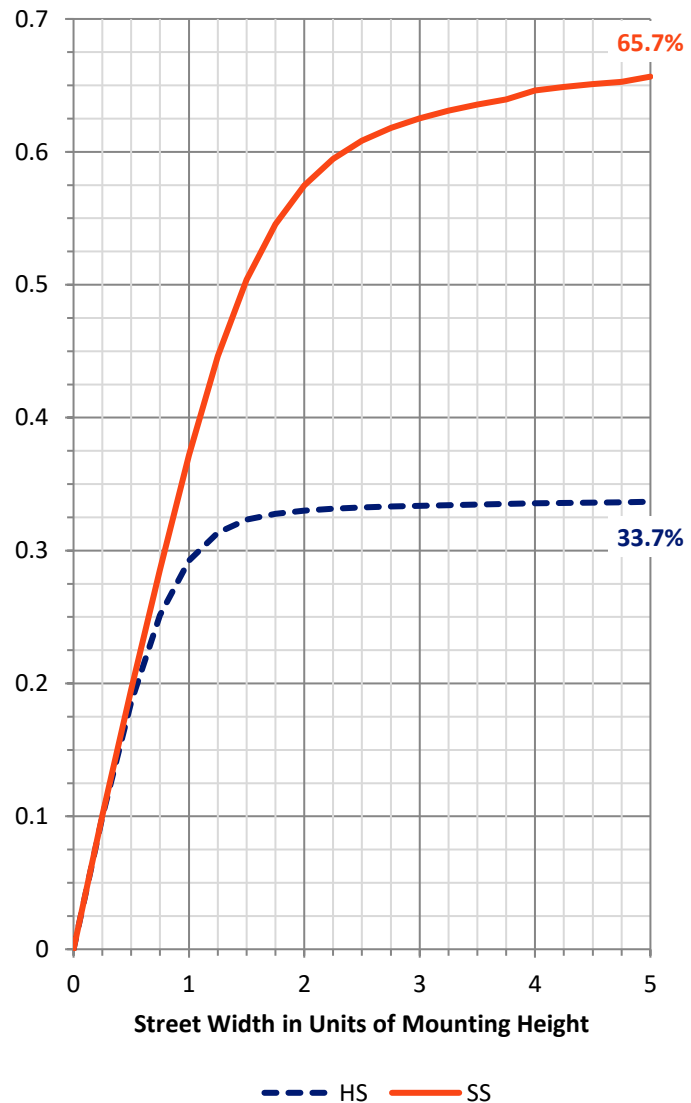
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2294.5	0.0	2294.5
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	4459.3	0.0	4459.3
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	6753.8	0.0	6753.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.8	1.0
10°-20°	206.9	3.1
20°-30°	355.7	5.3
30°-40°	572.2	8.5
40°-50°	943.1	14.0
50°-60°	1478.3	21.9
60°-70°	2045.8	30.3
70°-80°	925.8	13.7
80°-90°	156.2	2.3
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°	6753.8	100.0
0°-180°	6753.8	100.0



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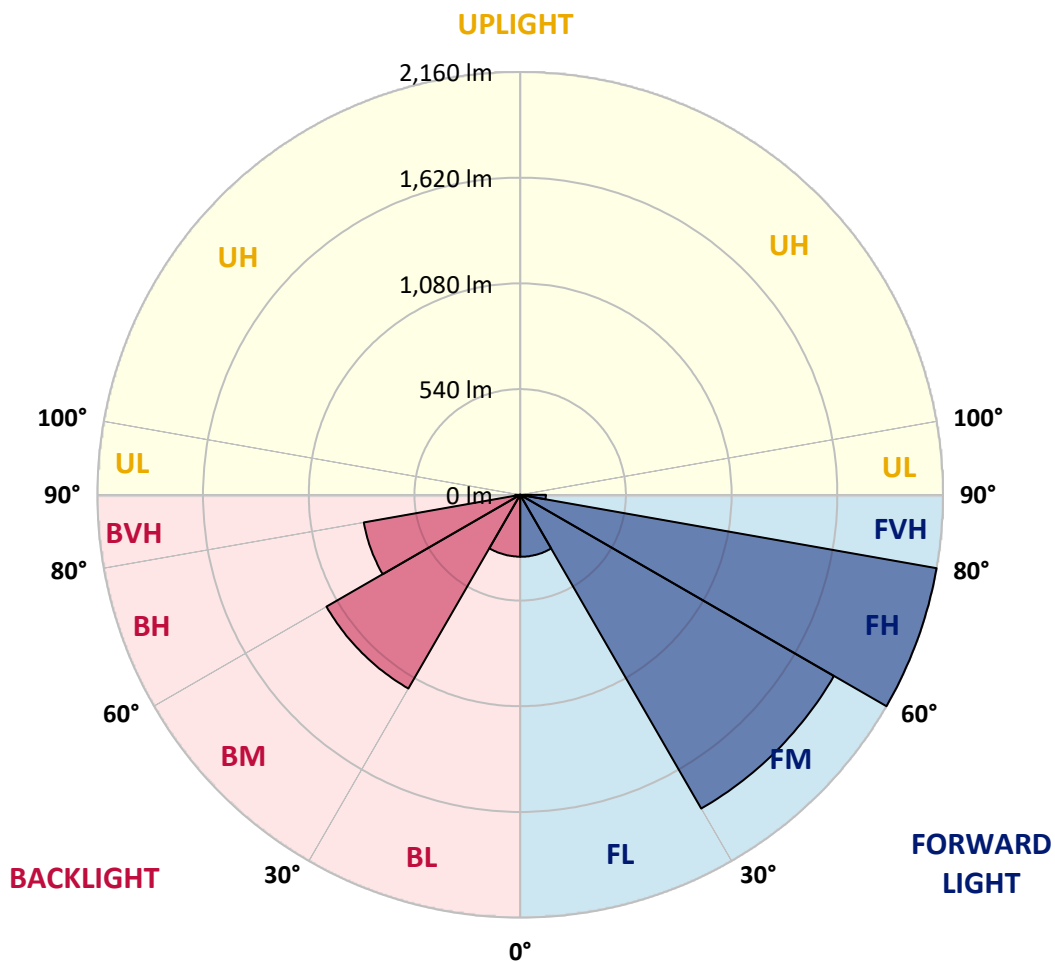
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	316.8	4.7			
FM	(30°-60°)	1850.8	27.4			
FH	(60°-80°)	2160.5	32.0			G2/5000
FVH	(80°-90°)	131.3	1.9			G2/225
BL	(0°-30°)	315.7	4.7	B1/500		
BM	(30°-60°)	1142.7	16.9	B2/2500		
BH	(60°-80°)	811.1	12.0	B2/1000		G2/1000
BVH	(80°-90°)	24.9	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0
2.5°	726.1	725.6	725.2	725.2	724.7	725.2	725.6	726.1	725.6	726.1	725.6
5°	724.7	724.7	724.3	724.3	724.3	724.3	724.7	725.2	724.7	725.6	724.7
7.5°	718.9	721.6	720.7	721.6	722.5	723.4	723.8	724.7	726.1	727.0	726.1
10°	711.2	712.5	713.0	713.9	715.7	718.0	719.8	722.0	725.2	726.1	727.0
12.5°	697.1	699.0	700.3	702.1	704.8	708.5	711.6	715.2	720.7	724.3	727.5
15°	686.7	689.0	689.5	691.7	694.4	698.5	702.6	708.0	715.2	721.6	727.9
17.5°	693.5	694.4	693.5	693.5	694.4	696.2	699.4	703.9	711.6	719.3	727.0
20°	713.9	713.9	713.0	712.5	711.6	709.8	709.4	708.9	713.9	719.8	726.5
22.5°	733.3	733.3	732.9	734.7	734.2	734.2	732.9	730.6	728.4	727.5	732.0
25°	745.5	747.4	748.3	751.0	752.8	755.5	756.4	756.0	752.8	747.4	746.0
27.5°	765.5	766.8	767.7	770.9	774.5	777.7	780.8	784.9	784.9	779.9	773.1
30°	803.9	802.1	803.0	803.9	807.1	811.6	815.7	821.1	823.8	822.0	813.0
32.5°	839.6	841.5	842.4	845.1	848.2	855.0	860.0	866.3	872.2	873.1	868.6
35°	892.1	891.2	889.9	899.4	903.0	910.7	916.6	925.6	930.1	934.2	931.5
37.5°	974.9	972.2	970.4	973.1	978.1	983.1	991.7	998.4	1006.1	1015.6	1012.5
40°	1092.1	1097.5	1089.8	1093.4	1097.5	1086.2	1093.9	1100.2	1113.3	1113.8	1113.3
42.5°	1244.5	1248.6	1246.8	1249.1	1241.8	1238.2	1235.0	1238.2	1254.5	1252.2	1241.4
45°	1397.0	1402.9	1401.5	1402.4	1416.5	1410.6	1415.5	1416.5	1433.2	1428.7	1420.5
47.5°	1527.3	1537.2	1539.5	1547.6	1566.6	1582.0	1603.3	1619.1	1627.3	1632.7	1639.0
50°	1630.4	1637.7	1650.3	1670.7	1698.3	1725.0	1772.9	1804.2	1832.7	1852.6	1872.9
52.5°	1698.7	1706.9	1726.3	1757.1	1796.9	1845.8	1901.9	1967.0	2027.2	2062.5	2092.8
55°	1726.8	1734.9	1758.9	1799.2	1852.1	1914.5	1995.1	2086.9	2167.0	2248.0	2294.6
57.5°	1710.5	1719.6	1747.2	1792.4	1856.2	1938.1	2038.0	2150.7	2267.9	2390.5	2484.1
60°	1662.6	1670.7	1701.9	1749.0	1821.8	1914.1	2034.0	2175.1	2339.8	2521.7	2699.4
62.5°	1596.5	1608.7	1636.3	1684.3	1756.7	1857.5	1994.2	2177.8	2414.0	2707.1	3053.2
65°	1512.4	1521.4	1545.8	1583.8	1663.5	1768.9	1913.2	2138.0	2446.6	2862.3	3356.3
66°	1468.9	1477.5	1500.1	1535.9	1608.7	1710.1	1854.4	2084.6	2410.4	2861.4	3388.4
67.5°	1392.5	1396.5	1412.8	1448.1	1495.6	1586.6	1720.5	1936.3	2257.0	2740.6	3298.9
70°	1168.1	1174.0	1189.8	1207.9	1225.5	1258.1	1351.8	1494.3	1750.8	2214.5	2746.9
72.5°	808.0	817.0	834.2	867.7	895.3	936.5	973.1	1020.6	1105.7	1427.8	1965.2
75°	584.0	587.2	612.5	671.4	727.0	809.3	882.2	905.2	876.3	871.3	1154.5
77.5°	348.3	352.9	389.5	448.8	506.7	618.4	767.7	883.1	946.9	924.2	874.0
80°	146.6	152.9	174.6	190.0	238.0	331.6	479.1	660.0	828.3	931.9	908.4
82.5°	47.0	54.7	64.7	78.3	92.3	123.5	191.4	286.4	452.4	674.5	829.2
85°	17.2	17.6	24.4	33.9	37.5	43.4	55.6	86.0	152.9	252.9	470.5
87.5°	6.8	8.1	9.5	13.1	13.6	14.0	15.8	20.4	19.9	17.2	89.1
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):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0
2.5°	726.1	727.0	726.5	727.0	727.0	726.1	726.1	727.9	726.5	727.5	727.5
5°	725.6	726.5	726.1	727.0	727.0	726.5	726.5	729.3	728.8	730.2	731.1
7.5°	727.5	727.9	727.5	727.5	728.8	728.4	728.8	729.7	732.0	734.2	736.0
10°	729.7	730.6	732.0	732.4	734.2	733.8	735.1	736.5	738.8	741.0	743.3
12.5°	732.9	735.6	739.7	740.6	742.4	743.7	746.0	747.4	749.2	752.8	755.5
15°	735.6	740.6	745.5	747.4	749.2	751.0	753.2	754.6	757.8	760.9	764.1
17.5°	736.5	742.4	748.7	751.0	752.8	756.0	758.7	761.4	765.0	769.1	772.7
20°	737.0	745.1	753.2	756.0	760.0	764.5	769.1	771.3	776.3	781.3	784.5
22.5°	741.0	751.0	762.3	767.3	771.3	779.5	785.4	789.0	794.9	798.9	800.3
25°	752.3	762.7	776.3	784.0	790.8	802.6	809.8	816.6	819.7	825.2	823.8
27.5°	772.7	780.8	798.5	808.9	817.5	832.9	846.9	853.2	858.2	860.9	857.7
30°	807.5	810.7	830.1	842.8	857.3	881.3	896.6	904.8	911.1	911.6	903.4
32.5°	859.6	854.6	871.8	889.9	908.9	937.8	958.6	967.2	972.2	972.7	954.6
35°	930.1	921.5	936.0	953.7	977.2	1015.2	1041.4	1051.4	1059.1	1055.4	1028.7
37.5°	1019.2	1018.8	1025.6	1048.2	1074.9	1123.8	1151.3	1156.8	1156.3	1145.5	1105.2
40°	1118.3	1110.2	1111.1	1127.4	1158.1	1222.4	1260.8	1269.9	1266.7	1250.9	1198.4
42.5°	1243.2	1239.6	1227.4	1235.9	1264.4	1342.7	1389.3	1398.4	1401.1	1374.8	1312.9
45°	1418.3	1415.1	1388.0	1389.8	1410.6	1492.9	1541.3	1556.2	1556.7	1531.8	1451.3
47.5°	1630.4	1627.7	1596.1	1587.0	1597.4	1670.7	1730.9	1734.0	1734.9	1700.6	1616.9
50°	1871.1	1863.4	1839.4	1829.9	1817.7	1898.7	1947.1	1946.7	1941.7	1903.7	1809.6
52.5°	2103.6	2120.8	2111.8	2093.2	2093.7	2152.0	2197.7	2172.4	2175.6	2139.4	2031.3
55°	2352.0	2395.9	2428.9	2435.7	2432.5	2462.4	2487.7	2442.5	2425.7	2419.9	2305.0
57.5°	2615.8	2727.9	2829.7	2872.3	2856.0	2910.7	2933.3	2886.3	2887.2	2933.3	2834.3
60°	2968.2	3251.4	3507.9	3587.5	3624.6	3715.1	3674.8	3672.1	3743.1	3802.8	3619.2
62.5°	3502.9	3972.0	4381.5	4440.7	4470.6	4490.9	4472.8	4423.5	4496.8	4504.1	4220.9
65°	3908.2	4458.8	4854.7	4928.9	4923.4	4819.8	4719.4	4620.8	4619.9	4547.5	4182.9
66°	3952.1	4505.0	4890.9	4956.5	4932.5	4772.8	4645.2	4517.2	4476.0	4367.4	3997.4
67.5°	3856.2	4424.4	4807.6	4866.4	4815.3	4572.4	4398.6	4225.4	4163.4	4012.3	3635.0
70°	3296.6	3882.0	4394.6	4479.6	4419.0	4096.4	3839.0	3648.6	3479.8	3331.0	3019.7
72.5°	2556.0	2994.0	3536.4	3625.0	3630.0	3377.6	3087.6	2904.8	2708.5	2559.2	2325.8
75°	1676.6	2007.7	2305.9	2276.0	2284.6	2086.0	1913.2	1761.2	1583.4	1465.8	1354.5
77.5°	979.9	1098.4	1071.3	997.1	934.7	734.7	525.7	361.0	314.9	328.4	370.5
80°	851.9	785.4	614.8	540.6	491.8	333.9	179.6	126.7	111.3	112.6	119.4
82.5°	917.0	951.4	780.8	642.9	560.5	393.1	211.3	105.4	76.0	88.7	97.7
85°	711.6	905.7	835.1	705.7	593.5	418.0	215.8	67.0	45.2	60.6	76.5
87.5°	202.7	320.7	256.5	226.7	182.8	124.9	51.6	26.7	24.4	31.7	43.9
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0	727.0
2.5°	727.9	727.9	729.3	729.7	730.2	730.2	731.1	731.1	731.5	733.3	732.9
5°	732.4	733.8	735.6	736.5	737.9	738.3	739.7	739.7	741.0	742.4	741.9
7.5°	737.9	739.2	740.6	741.9	743.3	745.1	744.6	744.2	743.7	742.8	741.9
10°	745.5	746.9	748.3	747.8	746.9	746.0	742.4	738.3	736.5	732.9	730.2
12.5°	758.2	759.6	758.2	754.6	749.6	743.7	736.0	729.3	725.2	719.8	716.6
15°	767.7	769.1	766.4	760.0	751.9	744.2	733.8	725.2	718.0	712.1	707.5
17.5°	775.0	774.0	768.2	760.9	752.3	746.0	736.5	727.0	718.4	710.3	703.9
20°	785.4	780.4	771.8	762.7	754.1	748.7	741.0	732.4	723.4	711.6	703.5
22.5°	798.9	789.9	778.6	769.5	761.4	756.0	748.3	740.1	731.5	718.0	706.6
25°	818.4	803.9	790.8	781.3	774.0	768.6	759.1	750.5	741.0	727.5	713.0
27.5°	845.5	824.7	811.1	801.6	794.4	788.1	775.9	765.5	753.2	739.7	722.5
30°	880.8	855.5	840.6	832.4	824.7	815.7	802.6	787.2	771.3	753.2	734.7
32.5°	924.7	896.2	882.2	874.0	864.1	851.9	834.7	814.3	790.8	766.8	743.7
35°	987.1	954.6	939.2	925.1	910.7	892.6	866.8	837.4	806.2	775.0	746.5
37.5°	1049.1	1018.8	999.8	985.3	962.7	933.3	897.6	856.8	815.2	775.4	741.0
40°	1136.9	1101.6	1079.4	1053.6	1017.0	971.3	919.3	864.5	813.0	765.0	724.3
42.5°	1244.5	1204.3	1171.3	1124.7	1067.7	1001.6	929.7	860.0	797.1	741.9	697.1
45°	1380.7	1328.2	1273.0	1199.8	1112.4	1020.2	929.2	844.2	770.0	707.5	663.2
47.5°	1539.5	1465.8	1373.0	1261.3	1141.8	1024.7	914.7	815.7	729.3	660.5	609.4
50°	1702.8	1596.1	1464.4	1308.8	1156.8	1013.4	882.6	769.1	675.9	597.6	542.4
52.5°	1904.1	1738.6	1547.2	1340.9	1150.4	979.9	829.2	703.5	603.9	527.5	464.2
55°	2143.9	1902.3	1625.9	1358.5	1122.4	919.7	748.3	617.5	513.0	443.3	386.3
57.5°	2540.7	2158.8	1760.3	1384.8	1067.2	830.1	649.6	514.4	416.2	356.9	311.2
60°	3224.7	2685.0	2044.4	1449.5	990.7	702.6	524.3	403.1	322.1	274.6	242.5
62.5°	3702.0	3003.9	2197.3	1427.3	860.9	553.3	387.7	288.2	234.8	203.6	181.9
65°	3609.2	2878.1	2013.2	1212.4	674.5	391.3	257.9	195.0	164.7	145.2	134.4
66°	3442.7	2739.3	1872.9	1088.5	584.9	326.2	212.6	161.5	141.6	127.6	120.3
67.5°	3139.2	2451.5	1620.9	873.6	437.9	240.7	161.5	125.8	114.9	107.7	102.7
70°	2599.0	1938.5	1116.1	516.2	231.6	134.8	102.7	92.7	87.8	84.6	84.1
72.5°	1992.8	1390.7	645.6	249.7	124.0	89.6	78.7	75.1	73.3	72.4	72.4
75°	1231.0	784.5	288.6	125.3	85.5	73.3	68.3	66.5	66.0	66.0	66.0
77.5°	432.9	273.2	129.4	91.8	75.1	66.0	62.0	61.1	62.0	62.0	62.0
80°	119.4	105.4	93.6	81.4	67.9	61.1	57.5	57.0	58.8	59.3	57.5
82.5°	93.2	87.8	80.1	72.8	62.0	55.6	53.8	54.7	55.6	54.3	51.6
85°	79.6	76.0	56.1	56.1	50.2	48.4	48.0	48.9	48.4	44.8	41.2
87.5°	45.2	39.8	30.3	33.0	35.3	36.2	30.3	32.6	32.1	28.5	26.7
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):**

	160°	165°	170°	175°	180°
0°	727.0	727.0	727.0	727.0	727.0
2.5°	733.8	733.8	734.7	734.7	734.2
5°	742.8	742.8	744.2	743.3	743.7
7.5°	741.0	739.2	739.2	738.3	737.9
10°	728.4	725.2	723.4	724.3	722.9
12.5°	713.9	711.2	709.4	708.9	708.5
15°	704.8	701.7	700.3	699.4	699.4
17.5°	699.9	696.2	694.4	693.1	692.6
20°	697.6	693.1	690.4	689.0	688.1
22.5°	698.5	693.1	689.5	687.6	686.7
25°	702.1	695.3	690.8	688.5	687.2
27.5°	708.5	699.4	694.4	691.3	689.5
30°	716.1	703.5	696.2	691.7	689.9
32.5°	721.1	703.9	694.9	688.1	686.3
35°	720.2	699.0	687.2	678.6	677.2
37.5°	711.2	685.8	671.4	660.0	658.7
40°	691.7	665.9	649.2	637.9	635.2
42.5°	664.6	637.9	619.8	609.4	605.8
45°	624.8	592.2	575.4	566.9	561.9
47.5°	568.7	537.9	519.4	512.1	505.8
50°	504.9	470.9	457.4	449.2	442.0
52.5°	429.8	400.8	390.4	382.7	376.8
55°	356.9	336.6	324.4	316.2	316.7
57.5°	286.8	274.6	267.8	259.2	260.1
60°	225.7	215.3	215.3	209.9	208.1
62.5°	172.4	168.3	166.9	165.1	162.0
65°	130.7	130.7	131.2	131.2	129.4
66°	117.6	119.0	120.8	120.8	118.5
67.5°	101.8	103.6	105.4	106.3	106.3
70°	84.1	86.4	87.3	88.2	87.8
72.5°	73.7	75.6	75.6	76.0	75.1
75°	67.0	67.9	68.3	67.4	67.0
77.5°	62.0	62.4	62.0	61.5	61.1
80°	56.1	55.6	54.3	52.5	52.0
82.5°	48.4	46.6	45.7	43.0	42.5
85°	38.9	36.6	34.8	31.2	29.4
87.5°	25.8	24.9	23.5	17.2	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)