

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: P146603

Luminaire Tested: **LDRL-T3-F03-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146603  
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-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (21) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6241 lumens  
Efficiency: N/A  
Efficacy: 79.7 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

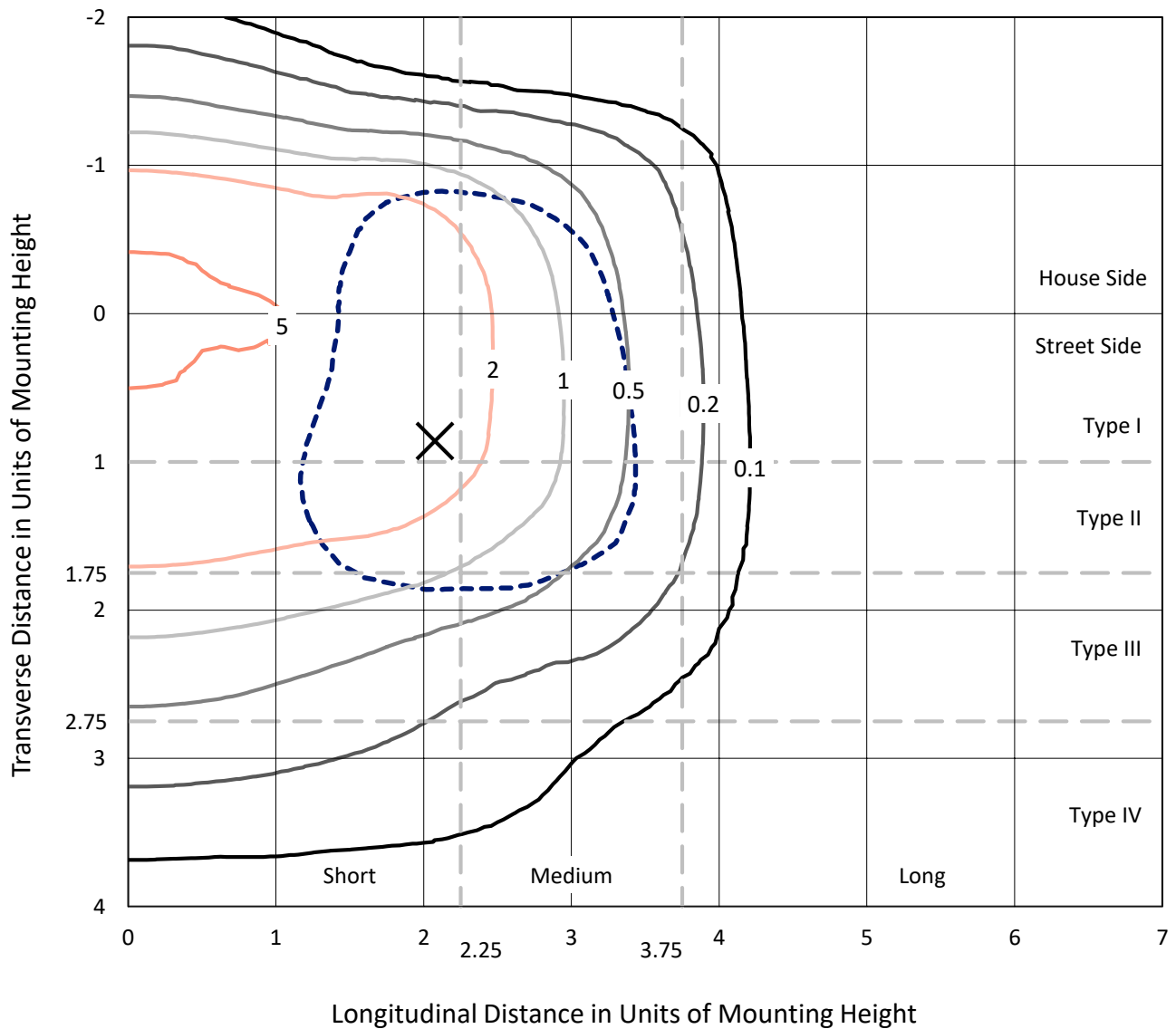
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

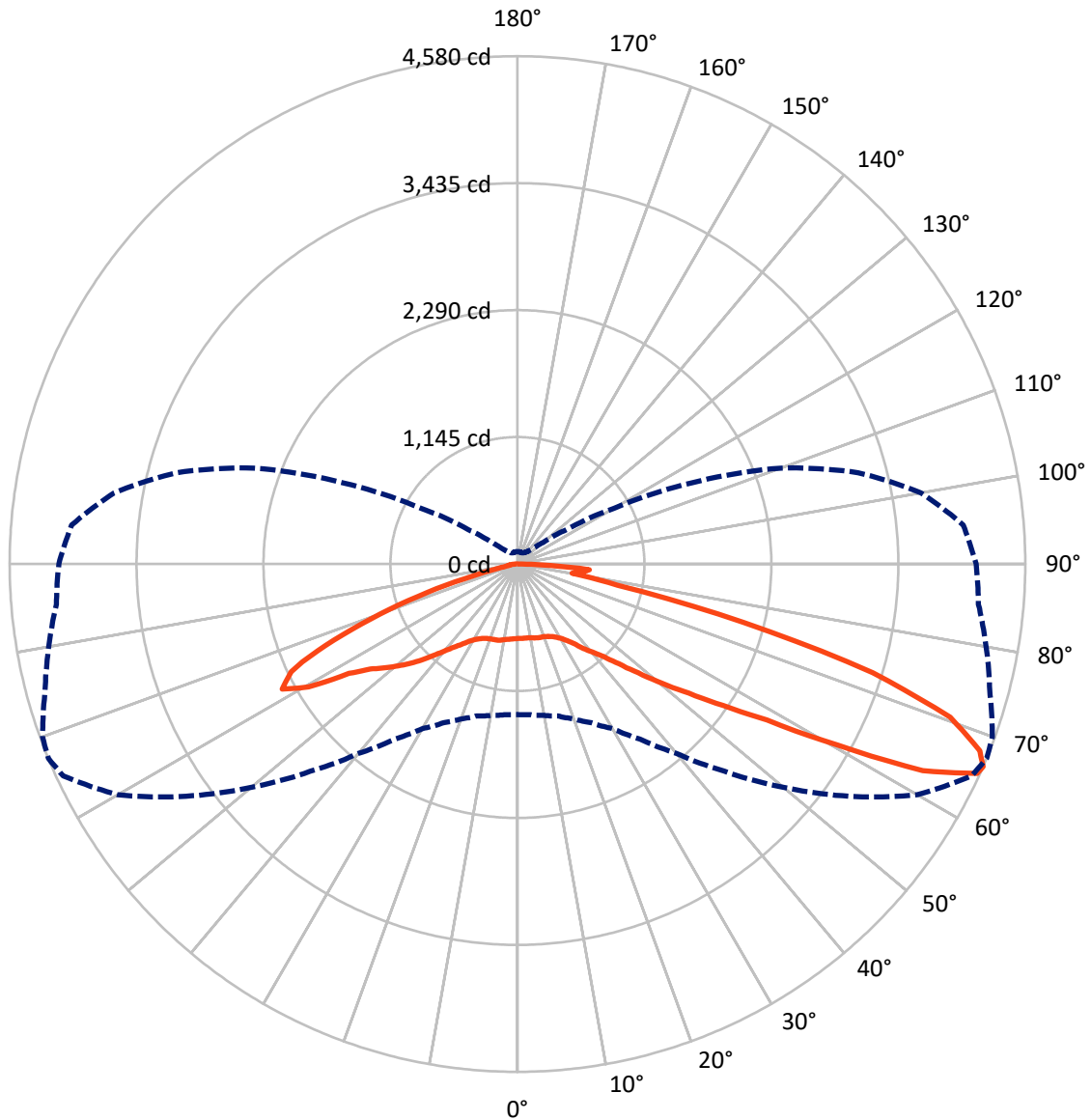
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 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	2120.3	0.0	2120.3
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	4120.7	0.0	4120.7
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	6241.0	0.0	6241.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.5	1.0
10°-20°	191.2	3.1
20°-30°	328.7	5.3
30°-40°	528.7	8.5
40°-50°	871.4	14.0
50°-60°	1366.0	21.9
60°-70°	1890.4	30.3
70°-80°	855.5	13.7
80°-90°	144.3	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°	6241.0	100.0
0°-180°	6241.0	100.0



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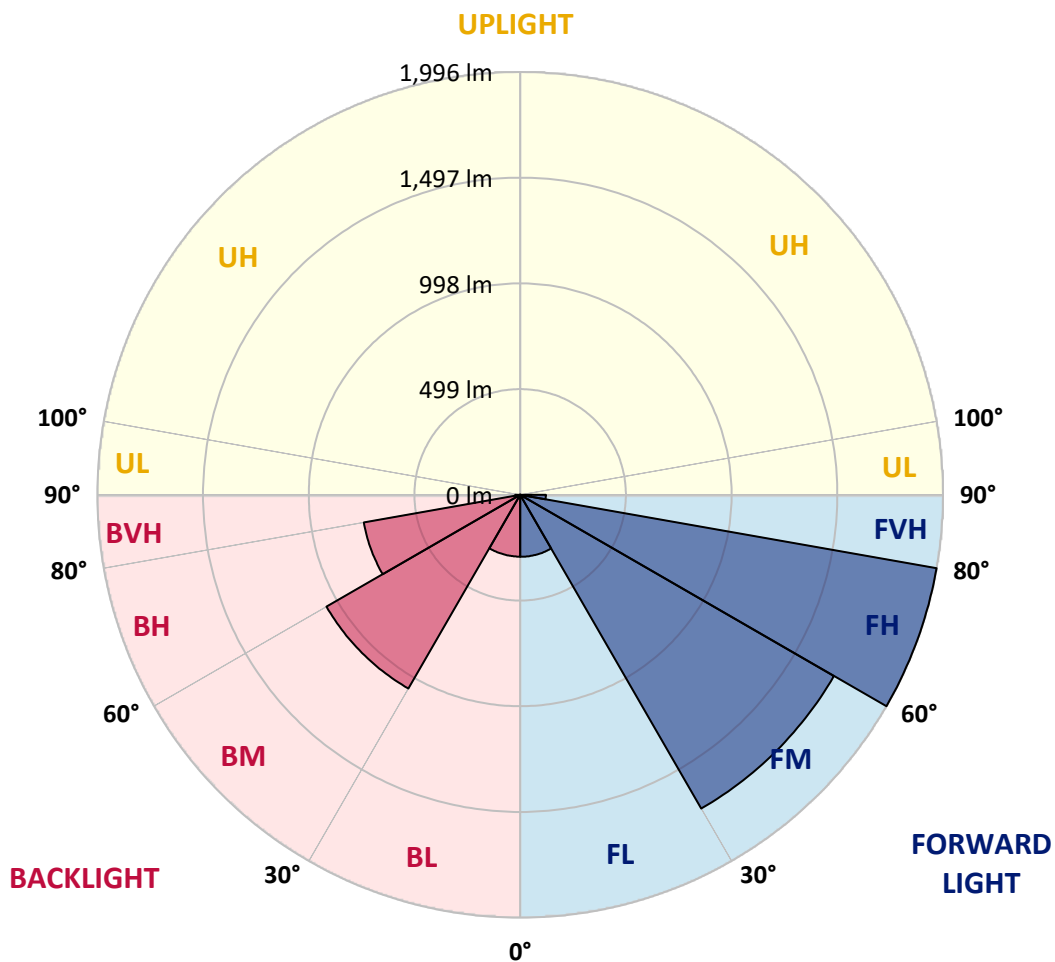
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	292.7	4.7			
FM	(30°-60°)	1710.3	27.4			
FH	(60°-80°)	1996.4	32.0			G2/5000
FVH	(80°-90°)	121.3	1.9			G2/225
BL	(0°-30°)	291.8	4.7	B1/500		
BM	(30°-60°)	1055.9	16.9	B2/2500		
BH	(60°-80°)	749.5	12.0	B2/1000		G2/1000
BVH	(80°-90°)	23.0	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°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	671.0	670.5	670.1	670.1	669.7	670.1	670.5	671.0	670.5	671.0	670.5
5°	669.7	669.7	669.3	669.3	669.3	669.3	669.7	670.1	669.7	670.5	669.7
7.5°	664.3	666.8	665.9	666.8	667.6	668.4	668.9	669.7	671.0	671.8	671.0
10°	657.2	658.4	658.8	659.7	661.3	663.4	665.1	667.2	670.1	671.0	671.8
12.5°	644.2	645.9	647.1	648.8	651.3	654.7	657.6	660.9	665.9	669.3	672.2
15°	634.6	636.7	637.1	639.2	641.7	645.5	649.2	654.2	660.9	666.8	672.6
17.5°	640.9	641.7	640.9	640.9	641.7	643.4	646.3	650.5	657.6	664.7	671.8
20°	659.7	659.7	658.8	658.4	657.6	655.9	655.5	655.1	659.7	665.1	671.4
22.5°	677.6	677.6	677.2	678.9	678.5	678.5	677.2	675.1	673.0	672.2	676.4
25°	688.9	690.6	691.4	693.9	695.6	698.1	699.0	698.5	695.6	690.6	689.4
27.5°	707.3	708.6	709.4	712.3	715.7	718.6	721.5	725.3	725.3	720.7	714.4
30°	742.9	741.2	742.0	742.9	745.8	750.0	753.7	758.7	761.3	759.6	751.2
32.5°	775.9	777.6	778.4	780.9	783.8	790.1	794.7	800.5	806.0	806.8	802.6
35°	824.4	823.5	822.3	831.1	834.4	841.5	847.0	855.3	859.5	863.3	860.7
37.5°	900.9	898.4	896.7	899.2	903.8	908.4	916.3	922.6	929.7	938.5	935.6
40°	1009.2	1014.2	1007.1	1010.4	1014.2	1003.7	1010.8	1016.7	1028.8	1029.2	1028.8
42.5°	1150.0	1153.8	1152.1	1154.2	1147.5	1144.2	1141.3	1144.2	1159.2	1157.1	1147.1
45°	1290.9	1296.3	1295.1	1295.9	1308.9	1303.5	1308.1	1308.9	1324.4	1320.2	1312.6
47.5°	1411.3	1420.5	1422.6	1430.1	1447.7	1461.9	1481.5	1496.2	1503.7	1508.7	1514.6
50°	1506.6	1513.3	1525.0	1543.8	1569.3	1594.0	1638.3	1667.1	1693.5	1711.9	1730.7
52.5°	1569.7	1577.3	1595.2	1623.7	1660.5	1705.6	1757.4	1817.6	1873.2	1905.9	1933.9
55°	1595.7	1603.2	1625.3	1662.6	1711.5	1769.2	1843.6	1928.4	2002.4	2077.2	2120.3
57.5°	1580.6	1589.0	1614.5	1656.3	1715.2	1790.9	1883.3	1987.4	2095.6	2208.9	2295.5
60°	1536.3	1543.8	1572.7	1616.1	1683.5	1768.7	1879.5	2009.9	2162.1	2330.2	2494.5
62.5°	1475.3	1486.6	1512.1	1556.4	1623.3	1716.5	1842.7	2012.5	2230.7	2501.6	2821.4
65°	1397.5	1405.9	1428.4	1463.6	1537.1	1634.5	1767.9	1975.7	2260.8	2644.9	3101.4
66°	1357.4	1365.3	1386.2	1419.3	1486.6	1580.2	1713.6	1926.3	2227.3	2644.1	3131.1
67.5°	1286.7	1290.5	1305.5	1338.2	1382.0	1466.1	1589.8	1789.2	2085.6	2532.5	3048.4
70°	1079.4	1084.8	1099.4	1116.2	1132.5	1162.6	1249.1	1380.8	1617.8	2046.3	2538.3
72.5°	746.6	755.0	770.9	801.8	827.3	865.3	899.2	943.1	1021.7	1319.3	1816.0
75°	539.7	542.6	566.0	620.4	671.8	747.9	815.2	836.5	809.7	805.1	1066.8
77.5°	321.9	326.1	359.9	414.7	468.2	571.5	709.4	816.0	875.0	854.1	807.7
80°	135.4	141.3	161.4	175.6	219.9	306.4	442.7	609.9	765.4	861.2	839.4
82.5°	43.5	50.6	59.8	72.3	85.3	114.1	176.8	264.6	418.0	623.3	766.3
85°	15.9	16.3	22.6	31.4	34.7	40.1	51.4	79.4	141.3	233.7	434.8
87.5°	6.3	7.5	8.8	12.1	12.5	13.0	14.6	18.8	18.4	15.9	82.4
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):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	671.0	671.8	671.4	671.8	671.8	671.0	671.0	672.6	671.4	672.2	672.2
5°	670.5	671.4	671.0	671.8	671.8	671.4	671.4	673.9	673.5	674.7	675.6
7.5°	672.2	672.6	672.2	672.2	673.5	673.0	673.5	674.3	676.4	678.5	680.2
10°	674.3	675.1	676.4	676.8	678.5	678.1	679.3	680.6	682.7	684.8	686.8
12.5°	677.2	679.7	683.5	684.3	686.0	687.3	689.4	690.6	692.3	695.6	698.1
15°	679.7	684.3	688.9	690.6	692.3	693.9	696.0	697.3	700.2	703.1	706.1
17.5°	680.6	686.0	691.9	693.9	695.6	698.5	701.1	703.6	706.9	710.7	714.0
20°	681.0	688.5	696.0	698.5	702.3	706.5	710.7	712.8	717.4	722.0	724.9
22.5°	684.8	693.9	704.4	709.0	712.8	720.3	725.7	729.1	734.5	738.3	739.5
25°	695.2	704.8	717.4	724.5	730.7	741.6	748.3	754.6	757.5	762.5	761.3
27.5°	714.0	721.5	737.8	747.5	755.4	769.6	782.6	788.4	793.0	795.5	792.6
30°	746.2	749.1	767.1	778.8	792.2	814.3	828.6	836.1	841.9	842.4	834.8
32.5°	794.3	789.7	805.6	822.3	839.8	866.6	885.8	893.8	898.4	898.8	882.1
35°	859.5	851.6	864.9	881.2	903.0	938.1	962.3	971.5	978.6	975.3	950.6
37.5°	941.8	941.4	947.7	968.6	993.3	1038.4	1063.9	1068.9	1068.5	1058.5	1021.3
40°	1033.4	1025.9	1026.7	1041.8	1070.2	1129.5	1165.1	1173.4	1170.5	1155.9	1107.4
42.5°	1148.8	1145.4	1134.1	1142.1	1168.4	1240.7	1283.8	1292.2	1294.7	1270.4	1213.2
45°	1310.6	1307.6	1282.6	1284.2	1303.5	1379.5	1424.3	1438.1	1438.5	1415.5	1341.1
47.5°	1506.6	1504.1	1474.8	1466.5	1476.1	1543.8	1599.4	1602.4	1603.2	1571.4	1494.1
50°	1729.0	1721.9	1699.8	1691.0	1679.7	1754.5	1799.2	1798.8	1794.2	1759.1	1672.2
52.5°	1943.9	1959.8	1951.4	1934.3	1934.7	1988.6	2030.8	2007.4	2010.4	1976.9	1877.0
55°	2173.4	2213.9	2244.5	2250.7	2247.8	2275.4	2298.8	2257.0	2241.5	2236.1	2129.9
57.5°	2417.1	2520.8	2614.8	2654.1	2639.1	2689.7	2710.6	2667.1	2667.9	2710.6	2619.0
60°	2742.8	3004.5	3241.5	3315.1	3349.3	3433.0	3395.7	3393.2	3458.9	3514.1	3344.3
62.5°	3236.9	3670.4	4048.7	4103.5	4131.1	4149.9	4133.2	4087.6	4155.3	4162.0	3900.3
65°	3611.5	4120.2	4486.0	4554.6	4549.5	4453.8	4361.0	4269.9	4269.0	4202.2	3865.2
66°	3652.0	4162.9	4519.4	4580.1	4557.9	4410.3	4292.4	4174.1	4136.1	4035.8	3693.8
67.5°	3563.4	4088.4	4442.5	4496.9	4449.6	4225.1	4064.6	3904.5	3847.2	3707.6	3359.0
70°	3046.3	3587.2	4060.9	4139.4	4083.4	3785.4	3547.5	3371.5	3215.6	3078.0	2790.4
72.5°	2361.9	2766.6	3267.8	3349.8	3354.4	3121.1	2853.1	2684.2	2502.8	2364.9	2149.2
75°	1549.3	1855.3	2130.8	2103.2	2111.1	1927.6	1767.9	1627.4	1463.1	1354.5	1251.6
77.5°	905.5	1015.0	989.9	921.4	863.7	678.9	485.8	333.6	291.0	303.5	342.4
80°	787.2	725.7	568.1	499.6	454.4	308.5	166.0	117.1	102.8	104.1	110.4
82.5°	847.4	879.1	721.5	594.0	518.0	363.3	195.2	97.4	70.2	81.9	90.3
85°	657.6	836.9	771.7	652.1	548.5	386.3	199.4	61.9	41.8	56.0	70.6
87.5°	187.3	296.4	237.0	209.4	168.9	115.4	47.7	24.7	22.6	29.3	40.6
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°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	672.6	672.6	673.9	674.3	674.7	674.7	675.6	675.6	676.0	677.6	677.2
5°	676.8	678.1	679.7	680.6	681.8	682.2	683.5	683.5	684.8	686.0	685.6
7.5°	681.8	683.1	684.3	685.6	686.8	688.5	688.1	687.7	687.3	686.4	685.6
10°	688.9	690.2	691.4	691.0	690.2	689.4	686.0	682.2	680.6	677.2	674.7
12.5°	700.6	701.9	700.6	697.3	692.7	687.3	680.2	673.9	670.1	665.1	662.2
15°	709.4	710.7	708.2	702.3	694.8	687.7	678.1	670.1	663.4	658.0	653.8
17.5°	716.1	715.3	709.8	703.1	695.2	689.4	680.6	671.8	663.8	656.3	650.5
20°	725.7	721.1	713.2	704.8	696.9	691.9	684.8	676.8	668.4	657.6	650.1
22.5°	738.3	729.9	719.4	711.1	703.6	698.5	691.4	683.9	676.0	663.4	653.0
25°	756.2	742.9	730.7	722.0	715.3	710.3	701.5	693.5	684.8	672.2	658.8
27.5°	781.3	762.1	749.5	740.8	734.1	728.2	716.9	707.3	696.0	683.5	667.6
30°	813.9	790.5	776.7	769.2	762.1	753.7	741.6	727.4	712.8	696.0	678.9
32.5°	854.5	828.1	815.2	807.7	798.5	787.2	771.3	752.5	730.7	708.6	687.3
35°	912.2	882.1	867.9	854.9	841.5	824.8	801.0	773.8	744.9	716.1	689.8
37.5°	969.4	941.4	923.9	910.5	889.6	862.4	829.4	791.8	753.3	716.5	684.8
40°	1050.5	1017.9	997.4	973.6	939.8	897.5	849.5	798.9	751.2	706.9	669.3
42.5°	1150.0	1112.8	1082.3	1039.3	986.6	925.5	859.1	794.7	736.6	685.6	644.2
45°	1275.9	1227.4	1176.4	1108.6	1028.0	942.7	858.7	780.1	711.5	653.8	612.8
47.5°	1422.6	1354.5	1268.8	1165.5	1055.1	946.9	845.3	753.7	673.9	610.3	563.1
50°	1573.5	1474.8	1353.2	1209.4	1068.9	936.4	815.6	710.7	624.6	552.2	501.2
52.5°	1759.5	1606.5	1429.7	1239.1	1063.1	905.5	766.3	650.1	558.1	487.4	428.9
55°	1981.1	1757.9	1502.4	1255.4	1037.2	849.9	691.4	570.6	474.1	409.7	357.0
57.5°	2347.7	1994.9	1626.6	1279.6	986.2	767.1	600.3	475.3	384.6	329.8	287.6
60°	2979.8	2481.1	1889.1	1339.4	915.5	649.2	484.5	372.5	297.6	253.8	224.1
62.5°	3420.8	2775.8	2030.4	1318.9	795.5	511.3	358.3	266.3	217.0	188.1	168.1
65°	3335.1	2659.6	1860.3	1120.4	623.3	361.6	238.3	180.2	152.2	134.2	124.2
66°	3181.3	2531.2	1730.7	1005.8	540.5	301.4	196.5	149.2	130.8	117.9	111.2
67.5°	2900.8	2265.4	1497.8	807.2	404.7	222.4	149.2	116.2	106.2	99.5	94.9
70°	2401.6	1791.3	1031.3	477.0	214.0	124.6	94.9	85.7	81.1	78.2	77.8
72.5°	1841.5	1285.1	596.5	230.8	114.5	82.8	72.7	69.4	67.7	66.9	66.9
75°	1137.5	724.9	266.7	115.8	79.0	67.7	63.1	61.5	61.0	61.0	61.0
77.5°	400.1	252.5	119.6	84.9	69.4	61.0	57.3	56.4	57.3	57.3	57.3
80°	110.4	97.4	86.5	75.2	62.7	56.4	53.1	52.7	54.3	54.8	53.1
82.5°	86.1	81.1	74.0	67.3	57.3	51.4	49.7	50.6	51.4	50.2	47.7
85°	73.6	70.2	51.8	51.8	46.4	44.7	44.3	45.1	44.7	41.4	38.0
87.5°	41.8	36.8	28.0	30.5	32.6	33.4	28.0	30.1	29.7	26.3	24.7
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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CATALOG NUMBER: LDRL-T3-F03-E-8030

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	671.8	671.8	671.8	671.8	671.8
2.5°	678.1	678.1	678.9	678.9	678.5
5°	686.4	686.4	687.7	686.8	687.3
7.5°	684.8	683.1	683.1	682.2	681.8
10°	673.0	670.1	668.4	669.3	668.0
12.5°	659.7	657.2	655.5	655.1	654.7
15°	651.3	648.4	647.1	646.3	646.3
17.5°	646.7	643.4	641.7	640.4	640.0
20°	644.6	640.4	637.9	636.7	635.8
22.5°	645.5	640.4	637.1	635.4	634.6
25°	648.8	642.5	638.3	636.3	635.0
27.5°	654.7	646.3	641.7	638.8	637.1
30°	661.8	650.1	643.4	639.2	637.5
32.5°	666.4	650.5	642.1	635.8	634.2
35°	665.5	645.9	635.0	627.1	625.8
37.5°	657.2	633.8	620.4	609.9	608.7
40°	639.2	615.4	599.9	589.4	586.9
42.5°	614.1	589.4	572.7	563.1	559.8
45°	577.3	547.2	531.7	523.8	519.2
47.5°	525.5	497.1	479.9	473.2	467.4
50°	466.5	435.2	422.6	415.1	408.4
52.5°	397.1	370.4	360.8	353.7	348.2
55°	329.8	311.0	299.7	292.2	292.6
57.5°	265.0	253.8	247.5	239.5	240.4
60°	208.6	199.0	199.0	194.0	192.3
62.5°	159.3	155.5	154.3	152.6	149.7
65°	120.8	120.8	121.2	121.2	119.6
66°	108.7	109.9	111.6	111.6	109.5
67.5°	94.1	95.7	97.4	98.2	98.2
70°	77.8	79.8	80.7	81.5	81.1
72.5°	68.1	69.8	69.8	70.2	69.4
75°	61.9	62.7	63.1	62.3	61.9
77.5°	57.3	57.7	57.3	56.9	56.4
80°	51.8	51.4	50.2	48.5	48.1
82.5°	44.7	43.1	42.2	39.7	39.3
85°	36.0	33.9	32.2	28.8	27.2
87.5°	23.8	23.0	21.7	15.9	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)