

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: P146599

Luminaire Tested: **LDRL-T3-E03-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146599
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-E03-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (63) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8181.3 lumens
Efficiency: N/A
Efficacy: 108.8 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

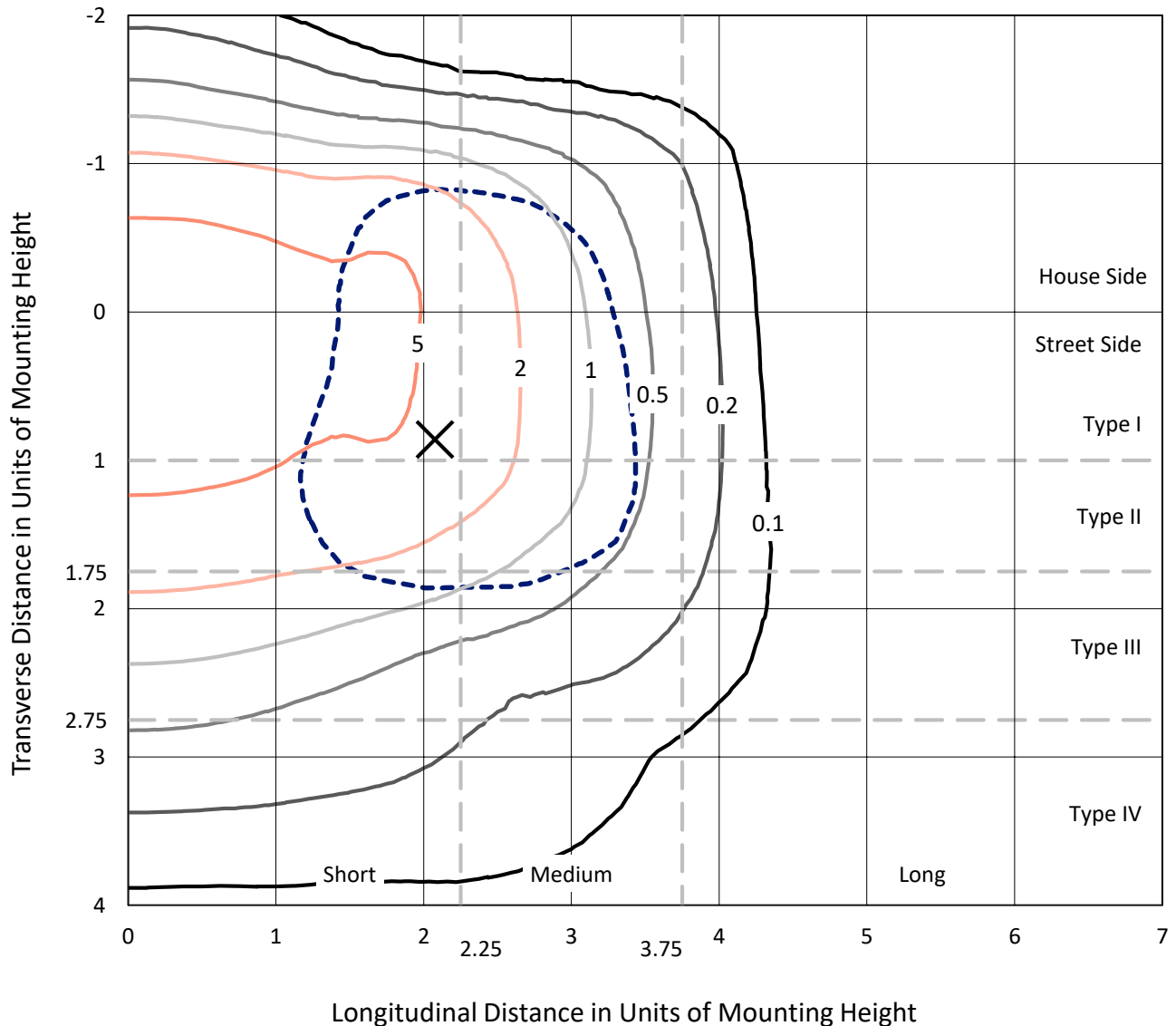
Input Watts (W): 75.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P146599
 CATALOG NUMBER: LDRL-T3-E03-E-7030

Iso-Footcandle Lines of Horizontal Illumination

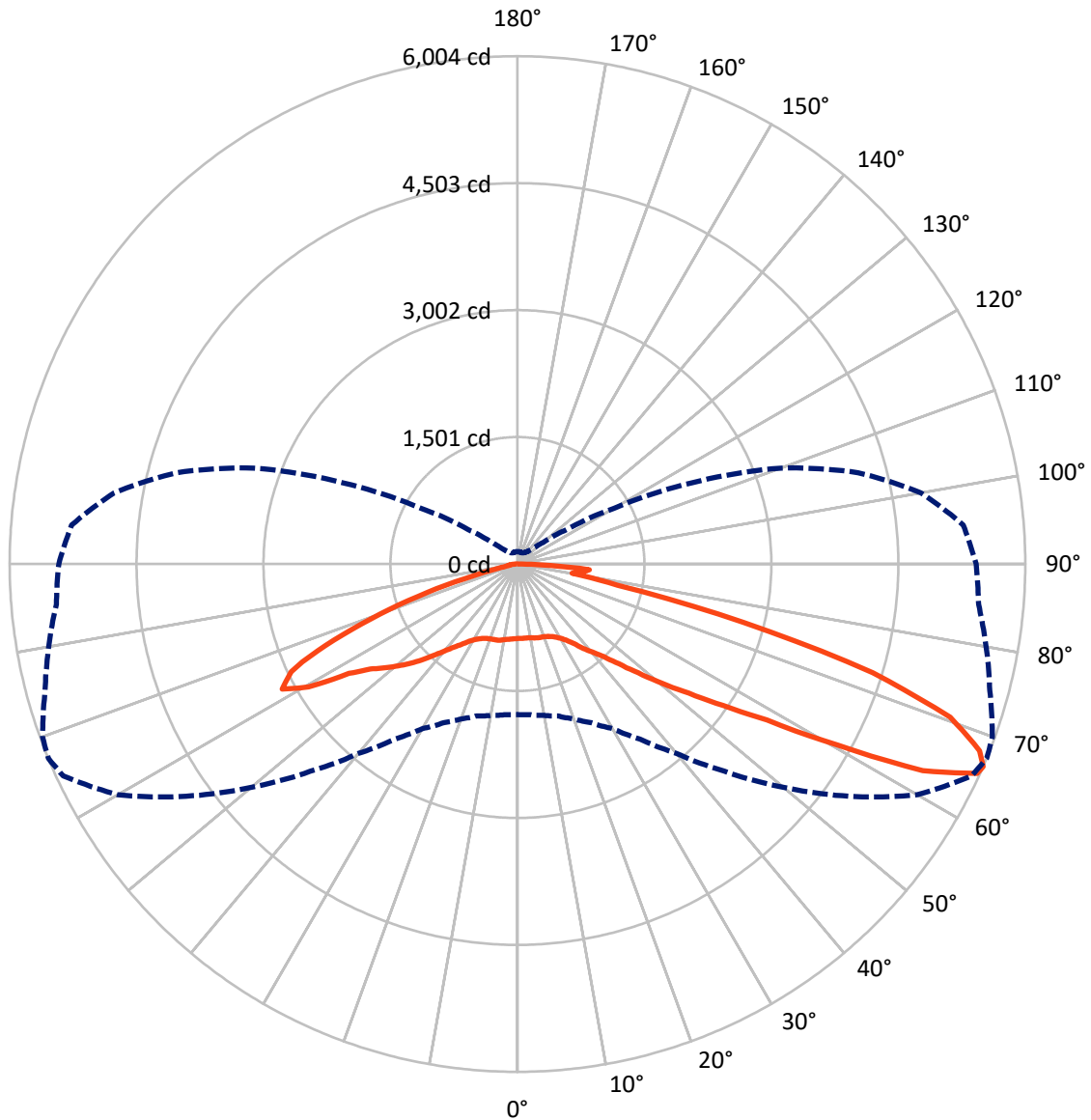
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P146599
CATALOG NUMBER: LDRL-T3-E03-E-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P146599

CATALOG NUMBER: LDRL-T3-E03-E-7030

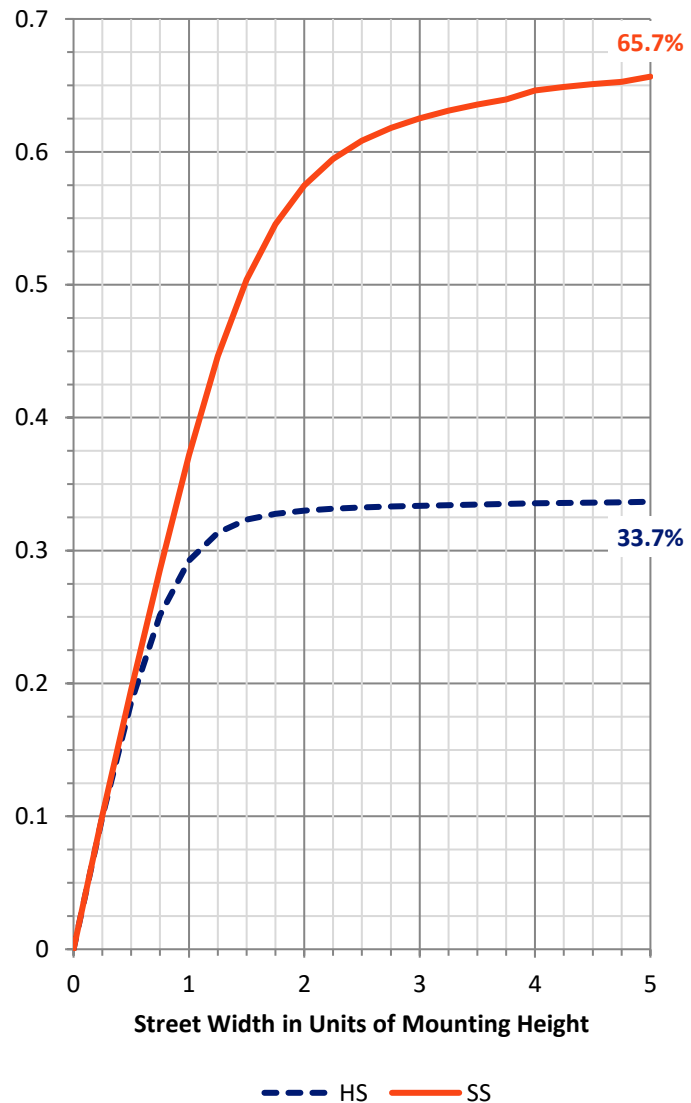
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2779.4	0.0	2779.4
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	5401.8	0.0	5401.8
	% Fixture	66.0	0.0	66.0
Total	Lumens	8181.3	0.0	8181.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	1.0
10°-20°	250.7	3.1
20°-30°	430.9	5.3
30°-40°	693.1	8.5
40°-50°	1142.4	14.0
50°-60°	1790.7	21.9
60°-70°	2478.2	30.3
70°-80°	1121.5	13.7
80°-90°	189.2	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°	8181.3	100.0
0°-180°	8181.3	100.0



REPORT NUMBER: P146599

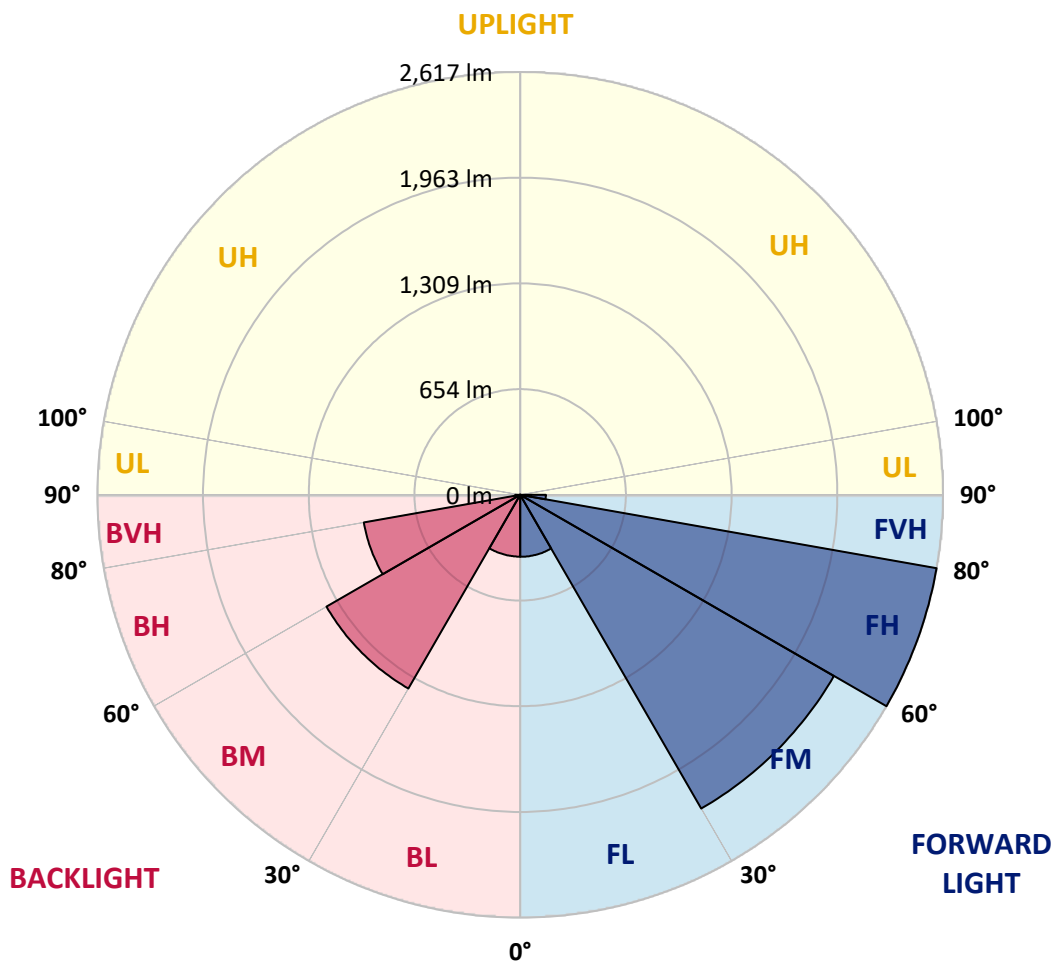
CATALOG NUMBER: LDRL-T3-E03-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	383.7	4.7			
FM	(30°-60°)	2242.0	27.4			
FH	(60°-80°)	2617.1	32.0			G2/5000
FVH	(80°-90°)	159.0	1.9			G2/225
BL	(0°-30°)	382.5	4.7	B1/500		
BM	(30°-60°)	1384.2	16.9	B2/2500		
BH	(60°-80°)	982.6	12.0	B2/1000		G2/1000
BVH	(80°-90°)	30.2	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





REPORT NUMBER: P146599

CATALOG NUMBER: LDRL-T3-E03-E-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7
2.5°	879.6	879.0	878.5	878.5	877.9	878.5	879.0	879.6	879.0	879.6	879.0
5°	877.9	877.9	877.4	877.4	877.4	877.4	877.9	878.5	877.9	879.0	877.9
7.5°	870.8	874.1	873.0	874.1	875.2	876.3	876.8	877.9	879.6	880.7	879.6
10°	861.5	863.1	863.7	864.8	867.0	869.7	871.9	874.6	878.5	879.6	880.7
12.5°	844.5	846.7	848.3	850.5	853.8	858.2	862.0	866.4	873.0	877.4	881.2
15°	831.9	834.6	835.2	837.9	841.2	846.1	851.1	857.6	866.4	874.1	881.7
17.5°	840.1	841.2	840.1	840.1	841.2	843.4	847.2	852.7	862.0	871.3	880.7
20°	864.8	864.8	863.7	863.1	862.0	859.8	859.3	858.7	864.8	871.9	880.1
22.5°	888.3	888.3	887.8	890.0	889.4	889.4	887.8	885.0	882.3	881.2	886.7
25°	903.1	905.3	906.4	909.7	911.9	915.2	916.3	915.7	911.9	905.3	903.7
27.5°	927.2	928.9	930.0	933.8	938.2	942.0	945.9	950.8	950.8	944.8	936.5
30°	973.8	971.6	972.7	973.8	977.7	983.1	988.1	994.6	997.9	995.7	984.8
32.5°	1017.1	1019.3	1020.4	1023.7	1027.5	1035.7	1041.8	1049.4	1056.6	1057.7	1052.2
35°	1080.7	1079.6	1077.9	1089.4	1093.8	1103.1	1110.3	1121.2	1126.7	1131.6	1128.4
37.5°	1181.0	1177.7	1175.5	1178.8	1184.8	1190.8	1201.2	1209.5	1218.8	1230.3	1226.4
40°	1322.9	1329.5	1320.2	1324.5	1329.5	1315.8	1325.1	1332.8	1348.7	1349.2	1348.7
42.5°	1507.6	1512.5	1510.3	1513.1	1504.3	1499.9	1496.1	1499.9	1519.6	1516.9	1503.7
45°	1692.3	1699.4	1697.7	1698.8	1715.8	1708.7	1714.7	1715.8	1736.1	1730.6	1720.8
47.5°	1850.1	1862.1	1864.9	1874.7	1897.8	1916.4	1942.1	1961.3	1971.2	1977.8	1985.4
50°	1975.0	1983.8	1999.1	2023.8	2057.2	2089.6	2147.7	2185.5	2220.0	2244.1	2268.8
52.5°	2057.8	2067.6	2091.2	2128.5	2176.7	2235.9	2303.8	2382.7	2455.6	2498.4	2535.1
55°	2091.8	2101.6	2130.7	2179.4	2243.6	2319.2	2416.7	2528.0	2625.0	2723.1	2779.5
57.5°	2072.0	2083.0	2116.4	2171.2	2248.5	2347.7	2468.8	2605.2	2747.2	2895.7	3009.1
60°	2013.9	2023.8	2061.6	2118.6	2206.8	2318.6	2463.9	2634.8	2834.3	3054.6	3270.0
62.5°	1933.9	1948.7	1982.2	2040.2	2127.9	2250.1	2415.6	2638.1	2924.2	3279.3	3698.5
65°	1832.0	1843.0	1872.6	1918.6	2015.0	2142.7	2317.5	2589.9	2963.6	3467.3	4065.7
66°	1779.4	1789.8	1817.2	1860.5	1948.7	2071.5	2246.3	2525.2	2919.8	3466.2	4104.6
67.5°	1686.8	1691.7	1711.4	1754.2	1811.7	1921.9	2084.1	2345.5	2734.0	3319.8	3996.1
70°	1415.0	1422.1	1441.3	1463.2	1484.6	1524.0	1637.5	1810.1	2120.8	2682.5	3327.5
72.5°	978.7	989.7	1010.5	1051.1	1084.5	1134.4	1178.8	1236.3	1339.3	1729.5	2380.6
75°	707.5	711.3	742.0	813.2	880.7	980.4	1068.6	1096.6	1061.5	1055.5	1398.5
77.5°	422.0	427.4	471.8	543.6	613.8	749.1	930.0	1069.7	1147.0	1119.6	1058.8
80°	177.6	185.2	211.5	230.2	288.3	401.7	580.3	799.5	1003.4	1128.9	1100.4
82.5°	57.0	66.3	78.4	94.8	111.8	149.6	231.8	346.9	548.0	817.1	1004.5
85°	20.8	21.4	29.6	41.1	45.5	52.6	67.4	104.1	185.2	306.3	569.9
87.5°	8.2	9.9	11.5	15.9	16.4	17.0	19.2	24.7	24.1	20.8	108.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P146599

CATALOG NUMBER: LDRL-T3-E03-E-7030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7
2.5°	879.6	880.7	880.1	880.7	880.7	879.6	879.6	881.7	880.1	881.2	881.2
5°	879.0	880.1	879.6	880.7	880.7	880.1	880.1	883.4	882.8	884.5	885.6
7.5°	881.2	881.7	881.2	881.2	882.8	882.3	882.8	883.9	886.7	889.4	891.6
10°	883.9	885.0	886.7	887.2	889.4	888.9	890.5	892.2	894.9	897.6	900.4
12.5°	887.8	891.1	896.0	897.1	899.3	900.9	903.7	905.3	907.5	911.9	915.2
15°	891.1	897.1	903.1	905.3	907.5	909.7	912.4	914.1	917.9	921.8	925.6
17.5°	892.2	899.3	907.0	909.7	911.9	915.7	919.0	922.3	926.7	931.6	936.0
20°	892.7	902.6	912.4	915.7	920.7	926.1	931.6	934.4	940.4	946.4	950.2
22.5°	897.6	909.7	923.4	929.4	934.4	944.2	951.3	955.7	962.9	967.8	969.4
25°	911.3	923.9	940.4	949.7	957.9	972.2	980.9	989.2	993.0	999.6	997.9
27.5°	936.0	945.9	967.2	979.8	990.3	1008.9	1025.9	1033.5	1039.6	1042.9	1039.0
30°	978.2	982.0	1005.6	1020.9	1038.5	1067.5	1086.2	1096.0	1103.7	1104.2	1094.4
32.5°	1041.2	1035.2	1056.0	1077.9	1101.0	1136.0	1161.2	1171.6	1177.7	1178.2	1156.3
35°	1126.7	1116.3	1133.8	1155.2	1183.7	1229.7	1261.5	1273.6	1282.9	1278.5	1246.2
37.5°	1234.7	1234.1	1242.3	1269.7	1302.1	1361.3	1394.7	1401.3	1400.7	1387.6	1338.8
40°	1354.7	1344.8	1345.9	1365.6	1402.9	1480.7	1527.3	1538.3	1534.4	1515.2	1451.7
42.5°	1505.9	1501.5	1486.8	1497.2	1531.7	1626.5	1682.9	1693.9	1697.2	1665.4	1590.3
45°	1718.0	1714.2	1681.3	1683.5	1708.7	1808.4	1867.1	1885.2	1885.7	1855.6	1758.0
47.5°	1975.0	1971.7	1933.4	1922.4	1935.0	2023.8	2096.7	2100.5	2101.6	2060.0	1958.6
50°	2266.6	2257.3	2228.2	2216.7	2201.9	2300.0	2358.6	2358.1	2352.1	2306.0	2192.0
52.5°	2548.2	2569.1	2558.1	2535.6	2536.2	2606.9	2662.2	2631.5	2635.4	2591.5	2460.6
55°	2849.1	2902.3	2942.3	2950.5	2946.7	2982.8	3013.5	2958.7	2938.4	2931.3	2792.1
57.5°	3168.6	3304.5	3427.8	3479.3	3459.6	3525.9	3553.3	3496.3	3497.4	3553.3	3433.3
60°	3595.5	3938.5	4249.3	4345.7	4390.7	4500.3	4451.5	4448.2	4534.2	4606.6	4384.1
62.5°	4243.2	4811.5	5307.5	5379.3	5415.4	5440.1	5418.2	5358.4	5447.2	5456.0	5112.9
65°	4734.3	5401.2	5880.7	5970.6	5964.0	5838.5	5716.8	5597.4	5596.3	5508.6	5066.9
66°	4787.4	5457.1	5924.5	6004.0	5975.0	5781.5	5627.0	5471.9	5422.0	5290.5	4842.2
67.5°	4671.2	5359.5	5823.7	5894.9	5833.0	5538.7	5328.3	5118.4	5043.3	4860.3	4403.3
70°	3993.4	4702.5	5323.4	5426.4	5353.0	4962.2	4650.4	4419.7	4215.3	4035.0	3658.0
72.5°	3096.3	3626.7	4283.8	4391.2	4397.2	4091.4	3740.2	3518.8	3280.9	3100.1	2817.3
75°	2030.9	2432.1	2793.2	2757.0	2767.5	2526.9	2317.5	2133.4	1918.0	1775.6	1640.7
77.5°	1187.0	1330.6	1297.7	1207.8	1132.2	890.0	636.8	437.3	381.4	397.9	448.8
80°	1031.9	951.3	744.7	654.9	595.7	404.4	217.6	153.4	134.8	136.5	144.7
82.5°	1110.8	1152.5	945.9	778.7	679.0	476.2	255.9	127.7	92.1	107.4	118.4
85°	862.0	1097.1	1011.6	854.9	719.0	506.4	261.4	81.1	54.8	73.4	92.6
87.5°	245.5	388.5	310.7	274.6	221.4	151.3	62.5	32.3	29.6	38.4	53.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P146599
 CATALOG NUMBER: LDRL-T3-E03-E-7030

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7	880.7
2.5°	881.7	881.7	883.4	883.9	884.5	884.5	885.6	885.6	886.1	888.3	887.8
5°	887.2	888.9	891.1	892.2	893.8	894.4	896.0	896.0	897.6	899.3	898.7
7.5°	893.8	895.4	897.1	898.7	900.4	902.6	902.0	901.5	900.9	899.8	898.7
10°	903.1	904.8	906.4	905.9	904.8	903.7	899.3	894.4	892.2	887.8	884.5
12.5°	918.5	920.1	918.5	914.1	908.1	900.9	891.6	883.4	878.5	871.9	868.0
15°	930.0	931.6	928.3	920.7	910.8	901.5	888.9	878.5	869.7	862.6	857.1
17.5°	938.7	937.6	930.5	921.8	911.3	903.7	892.2	880.7	870.2	860.4	852.7
20°	951.3	945.3	934.9	923.9	913.5	907.0	897.6	887.2	876.3	862.0	852.2
22.5°	967.8	956.8	943.1	932.2	922.3	915.7	906.4	896.5	886.1	869.7	856.0
25°	991.4	973.8	957.9	946.4	937.6	931.1	919.6	909.1	897.6	881.2	863.7
27.5°	1024.2	999.0	982.6	971.1	962.3	954.6	939.8	927.2	912.4	896.0	875.2
30°	1067.0	1036.3	1018.2	1008.3	999.0	988.1	972.2	953.5	934.4	912.4	890.0
32.5°	1120.1	1085.6	1068.6	1058.8	1046.7	1031.9	1011.1	986.4	957.9	928.9	900.9
35°	1195.8	1156.3	1137.7	1120.7	1103.1	1081.2	1050.0	1014.4	976.6	938.7	904.2
37.5°	1270.8	1234.1	1211.1	1193.6	1166.2	1130.5	1087.3	1037.9	987.5	939.3	897.6
40°	1377.1	1334.4	1307.6	1276.3	1231.9	1176.6	1113.6	1047.2	984.8	926.7	877.4
42.5°	1507.6	1458.8	1418.8	1362.4	1293.3	1213.3	1126.2	1041.8	965.6	898.7	844.5
45°	1672.5	1609.0	1542.1	1453.3	1347.6	1235.8	1125.6	1022.6	932.7	857.1	803.4
47.5°	1864.9	1775.6	1663.2	1527.9	1383.2	1241.2	1108.1	988.1	883.4	800.1	738.2
50°	2062.7	1933.4	1773.9	1585.4	1401.3	1227.5	1069.2	931.6	818.7	723.9	657.1
52.5°	2306.6	2106.0	1874.2	1624.3	1393.6	1187.0	1004.5	852.2	731.6	639.0	562.3
55°	2597.0	2304.4	1969.5	1645.7	1359.6	1114.1	906.4	748.0	621.4	537.0	468.0
57.5°	3077.6	2615.1	2132.3	1677.5	1292.8	1005.6	786.9	623.1	504.2	432.4	377.0
60°	3906.2	3252.4	2476.5	1755.8	1200.1	851.1	635.1	488.3	390.2	332.6	293.7
62.5°	4484.4	3638.8	2661.7	1729.0	1042.9	670.2	469.6	349.1	284.4	246.6	220.3
65°	4372.0	3486.4	2438.6	1468.7	817.1	474.0	312.4	236.2	199.5	175.9	162.8
66°	4170.4	3318.2	2268.8	1318.5	708.6	395.1	257.6	195.6	171.5	154.5	145.8
67.5°	3802.6	2969.7	1963.5	1058.2	530.5	291.5	195.6	152.3	139.2	130.4	124.4
70°	3148.3	2348.2	1351.9	625.3	280.6	163.3	124.4	112.3	106.3	102.5	101.9
72.5°	2414.0	1684.6	782.0	302.5	150.2	108.5	95.4	91.0	88.8	87.7	87.7
75°	1491.1	950.2	349.6	151.8	103.6	88.8	82.7	80.6	80.0	80.0	80.0
77.5°	524.4	331.0	156.7	111.2	91.0	80.0	75.1	74.0	75.1	75.1	75.1
80°	144.7	127.7	113.4	98.6	82.2	74.0	69.6	69.0	71.2	71.8	69.6
82.5°	112.9	106.3	97.0	88.2	75.1	67.4	65.2	66.3	67.4	65.8	62.5
85°	96.4	92.1	68.0	68.0	60.8	58.6	58.1	59.2	58.6	54.3	49.9
87.5°	54.8	48.2	36.7	40.0	42.7	43.8	36.7	39.5	38.9	34.5	32.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P146599

CATALOG NUMBER: LDRL-T3-E03-E-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	880.7	880.7	880.7	880.7	880.7
2.5°	888.9	888.9	890.0	890.0	889.4
5°	899.8	899.8	901.5	900.4	900.9
7.5°	897.6	895.4	895.4	894.4	893.8
10°	882.3	878.5	876.3	877.4	875.7
12.5°	864.8	861.5	859.3	858.7	858.2
15°	853.8	850.0	848.3	847.2	847.2
17.5°	847.8	843.4	841.2	839.6	839.0
20°	845.0	839.6	836.3	834.6	833.5
22.5°	846.1	839.6	835.2	833.0	831.9
25°	850.5	842.3	836.8	834.1	832.4
27.5°	858.2	847.2	841.2	837.4	835.2
30°	867.5	852.2	843.4	837.9	835.7
32.5°	873.5	852.7	841.7	833.5	831.3
35°	872.4	846.7	832.4	822.0	820.4
37.5°	861.5	830.8	813.2	799.5	797.9
40°	837.9	806.7	786.4	772.7	769.4
42.5°	805.0	772.7	750.8	738.2	733.8
45°	756.8	717.3	697.1	686.7	680.6
47.5°	688.8	651.6	629.1	620.3	612.7
50°	611.6	570.5	554.0	544.2	535.4
52.5°	520.6	485.5	472.9	463.6	456.5
55°	432.4	407.7	392.9	383.1	383.6
57.5°	347.4	332.6	324.4	314.0	315.1
60°	273.5	260.9	260.9	254.3	252.1
62.5°	208.8	203.9	202.2	200.0	196.2
65°	158.4	158.4	158.9	158.9	156.7
66°	142.5	144.1	146.3	146.3	143.6
67.5°	123.3	125.5	127.7	128.8	128.8
70°	101.9	104.7	105.8	106.9	106.3
72.5°	89.3	91.5	91.5	92.1	91.0
75°	81.1	82.2	82.7	81.7	81.1
77.5°	75.1	75.6	75.1	74.5	74.0
80°	68.0	67.4	65.8	63.6	63.0
82.5°	58.6	56.4	55.3	52.1	51.5
85°	47.1	44.4	42.2	37.8	35.6
87.5°	31.2	30.1	28.5	20.8	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)