

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: P144535

Luminaire Tested: **LDRL-RW-F02-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144535
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-F02-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4959.2 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

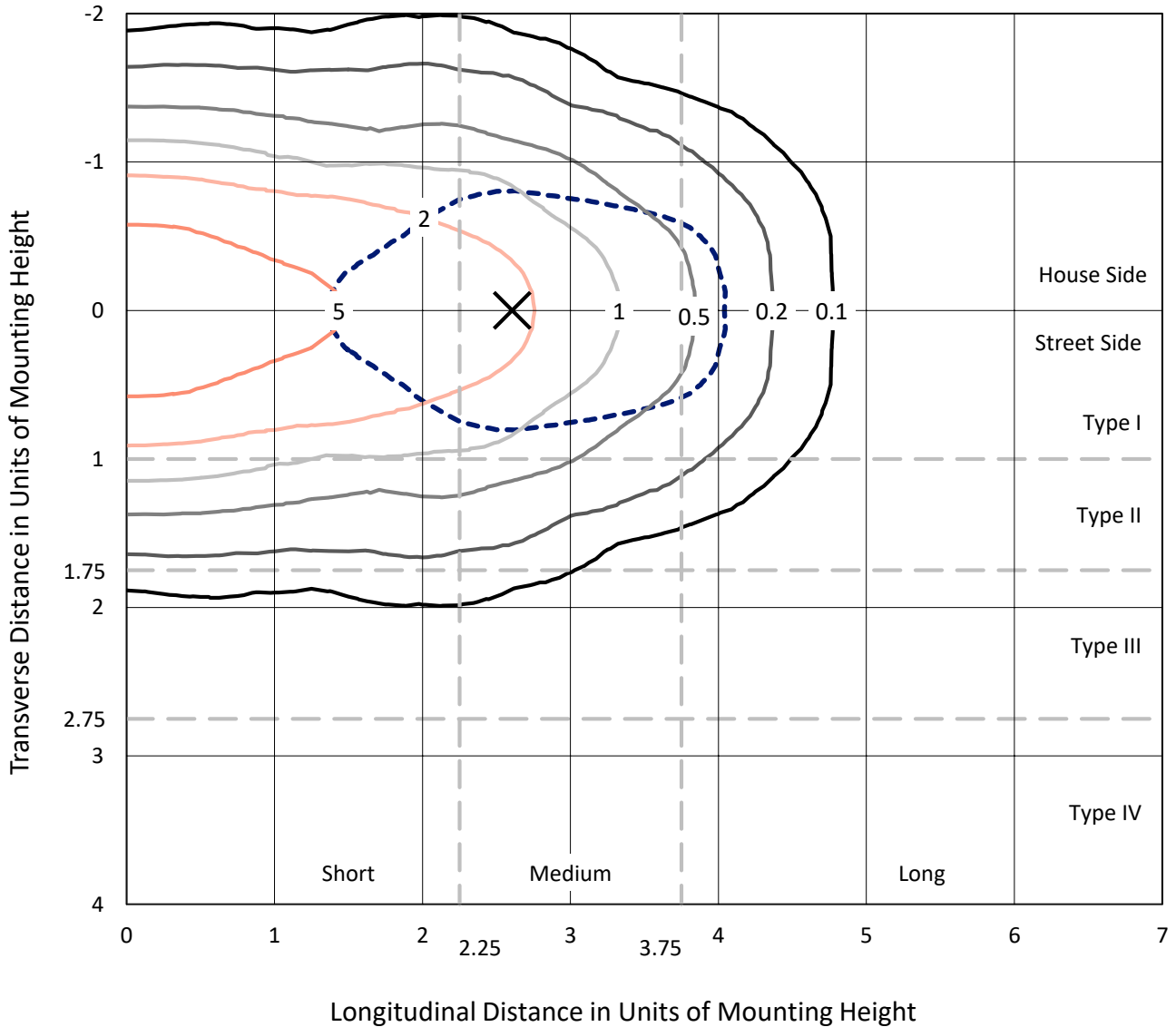
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P144535
 CATALOG NUMBER: LDRL-RW-F02-E

Iso-Footcandle Lines of Horizontal Illumination

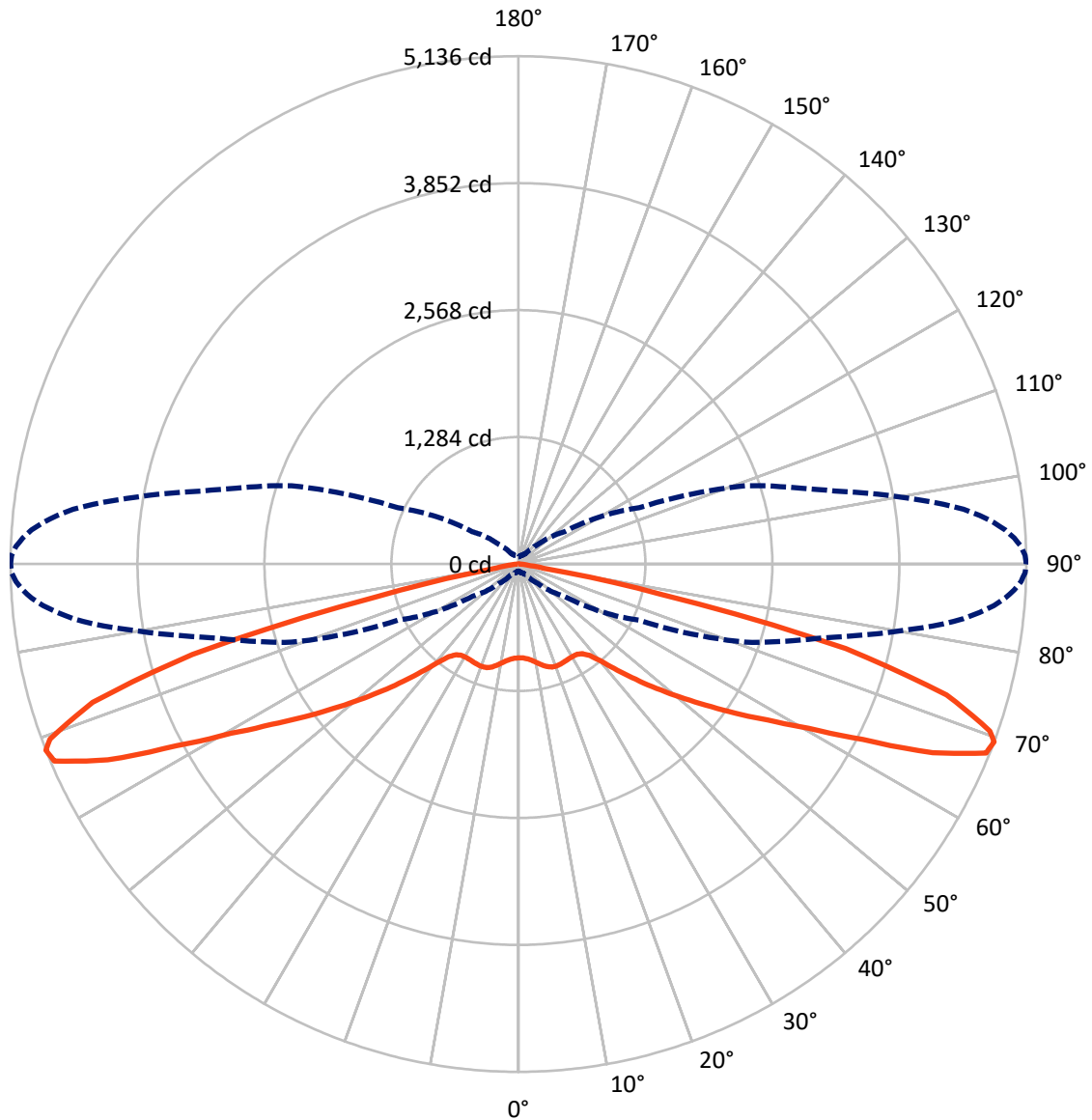
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P144535
CATALOG NUMBER: LDRL-RW-F02-E

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P144535

CATALOG NUMBER: LDRL-RW-F02-E

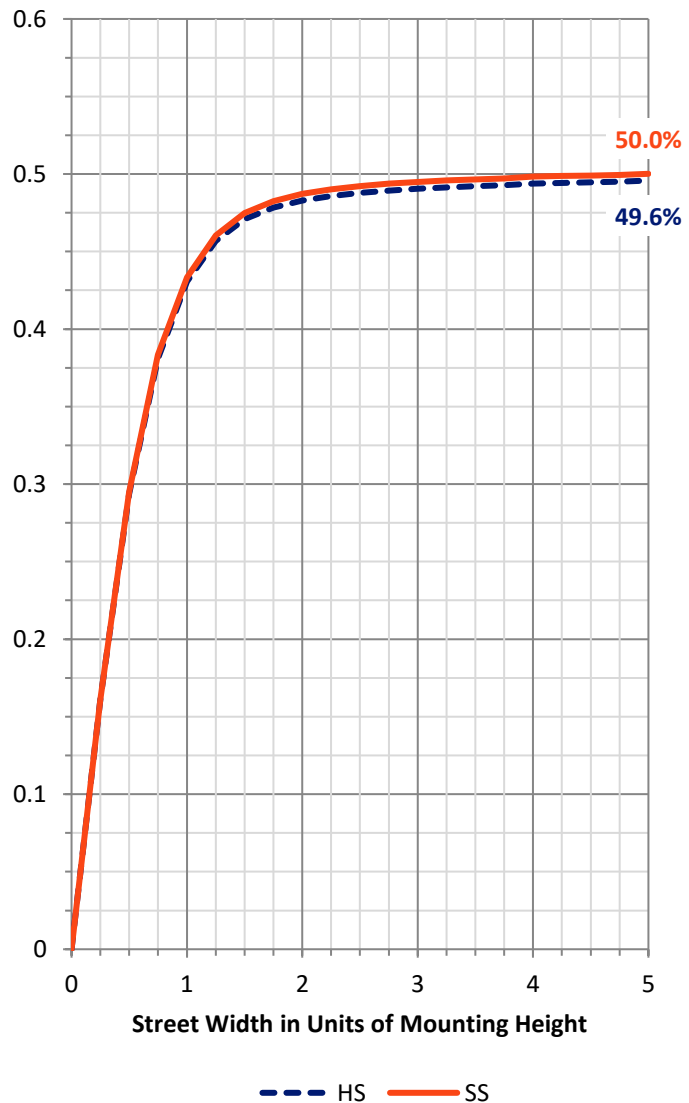
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2479.6	0.0	2479.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2479.6	0.0	2479.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	4959.2	0.0	4959.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	1.9
10°-20°	292.6	5.9
20°-30°	473.9	9.6
30°-40°	590.4	11.9
40°-50°	735.0	14.8
50°-60°	901.9	18.2
60°-70°	1112.3	22.4
70°-80°	691.5	13.9
80°-90°	68.7	1.4
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°	4959.2	100.0
0°-180°	4959.2	100.0

Coefficient of Utilization



REPORT NUMBER: P144535

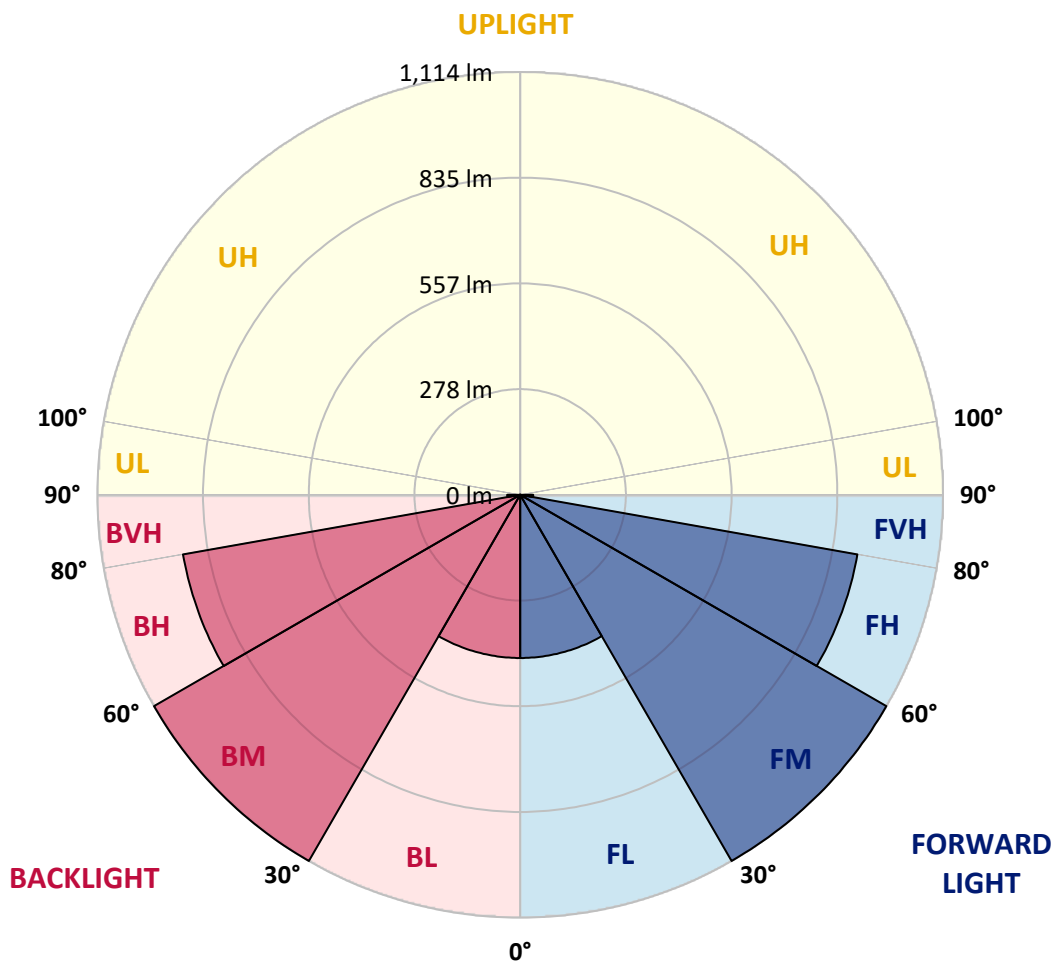
CATALOG NUMBER: LDRL-RW-F02-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	429.7	8.7			
FM	(30°-60°)	1113.6	22.5			
FH	(60°-80°)	901.9	18.2			G1/1800
FVH	(80°-90°)	34.3	0.7			G1/100
BL	(0°-30°)	429.7	8.7	B1/500		
BM	(30°-60°)	1113.6	22.5	B2/2500		
BH	(60°-80°)	901.9	18.2	B2/1000		G2/1000
BVH	(80°-90°)	34.3	0.7			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 I Short





REPORT NUMBER: P144535

CATALOG NUMBER: LDRL-RW-F02-E

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7
2.5°	952.2	951.2	953.0	954.6	954.2	954.4	953.8	953.0	953.1	953.1	953.2
5°	959.6	958.6	960.2	961.8	962.2	963.4	963.7	963.2	963.4	963.7	963.9
7.5°	968.5	967.6	969.8	971.8	975.6	977.6	979.6	981.6	981.7	981.9	982.0
10°	976.9	976.4	979.9	984.2	990.3	995.0	1000.5	1006.0	1006.4	1006.9	1007.3
12.5°	982.4	982.4	987.6	995.4	1006.0	1015.4	1025.0	1034.2	1035.1	1036.0	1036.8
15°	982.0	982.7	990.8	1005.0	1023.2	1039.8	1051.6	1061.6	1062.4	1063.3	1064.1
17.5°	975.3	975.4	987.0	1009.6	1038.0	1062.8	1077.9	1083.4	1083.7	1084.0	1084.3
20°	956.3	957.6	974.0	1006.8	1049.6	1083.8	1098.1	1095.8	1095.3	1094.8	1094.3
22.5°	923.8	925.4	947.2	991.3	1051.8	1097.3	1112.2	1101.8	1100.2	1098.6	1097.0
25°	878.5	881.3	905.0	961.4	1037.2	1101.2	1121.2	1104.6	1102.1	1099.6	1097.1
27.5°	826.2	827.5	855.4	914.7	1003.4	1088.1	1125.4	1110.4	1107.2	1104.1	1101.0
30°	765.6	769.0	798.2	860.0	955.6	1057.3	1123.7	1121.6	1118.1	1114.6	1111.1
32.5°	705.3	708.3	736.8	803.6	900.6	1014.6	1115.4	1138.6	1135.6	1132.8	1129.8
35°	644.6	648.2	677.6	749.2	846.0	966.0	1102.4	1162.8	1161.6	1160.3	1159.1
37.5°	591.2	593.6	622.4	696.9	798.1	921.6	1085.4	1195.4	1198.2	1201.1	1203.9
40°	537.0	539.2	569.4	645.7	754.0	883.6	1069.7	1236.3	1244.1	1251.8	1259.6
42.5°	484.8	486.8	516.0	592.0	705.0	850.8	1060.3	1285.8	1300.7	1315.6	1330.5
45°	431.2	432.6	460.0	534.1	649.0	812.5	1057.8	1341.5	1363.0	1384.5	1406.0
47.5°	378.5	381.8	410.0	480.3	585.2	757.7	1054.2	1403.0	1431.6	1460.1	1488.6
50°	328.2	331.7	360.8	427.4	523.4	692.6	1035.7	1472.9	1507.6	1542.4	1577.1
52.5°	276.8	280.4	309.4	373.2	466.1	619.3	984.2	1546.2	1587.5	1628.8	1670.1
55°	222.0	223.4	253.3	317.2	408.8	557.9	902.2	1613.4	1663.5	1713.5	1763.5
57.5°	161.4	166.0	195.5	254.9	350.4	503.6	797.8	1647.8	1710.2	1772.6	1835.1
60°	116.6	119.6	145.4	192.2	284.2	450.2	705.2	1622.7	1706.0	1789.4	1872.7
62.5°	92.1	95.4	115.4	144.8	219.8	391.6	644.7	1553.8	1670.7	1787.7	1904.6
65°	81.6	84.6	103.0	117.6	168.0	331.4	606.8	1485.6	1643.4	1801.2	1959.1
67.5°	74.4	77.6	93.8	103.6	138.9	292.6	588.8	1434.1	1616.3	1798.6	1980.8
69°	71.2	73.9	88.8	98.1	131.0	279.4	569.4	1346.9	1527.6	1708.3	1889.0
70°	69.4	71.8	85.4	94.6	127.8	268.4	540.9	1243.2	1417.6	1591.9	1766.3
72.5°	64.2	65.8	77.3	85.9	116.9	214.3	408.0	877.2	1025.0	1172.8	1320.6
75°	57.0	59.0	69.0	76.9	89.2	128.8	255.4	509.2	610.5	711.8	813.0
77.5°	48.9	51.2	59.4	72.0	71.8	83.8	155.0	292.4	341.6	390.8	440.0
80°	41.9	43.9	51.4	71.2	60.1	66.4	115.6	218.1	237.9	257.7	277.5
82.5°	32.9	34.5	43.1	58.8	48.0	50.6	88.0	198.6	212.1	225.5	238.9
85°	20.6	21.3	31.4	40.6	34.2	30.6	56.6	152.9	162.7	172.4	182.2
87.5°	8.2	10.1	15.2	14.6	14.6	12.2	18.3	55.1	60.1	65.2	70.2
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: P144535

CATALOG NUMBER: LDRL-RW-F02-E

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7
2.5°	953.2	953.3	953.0	952.5	953.0	952.5	952.6	953.2	953.0	953.0	952.6
5°	964.2	964.4	964.4	963.4	963.8	964.0	964.2	963.9	964.0	964.4	963.8
7.5°	982.2	982.4	982.9	983.4	983.0	983.2	983.5	983.2	982.7	983.8	983.0
10°	1007.7	1008.2	1008.1	1009.6	1009.0	1009.4	1011.0	1011.0	1010.1	1011.3	1011.0
12.5°	1037.6	1038.5	1038.4	1038.2	1038.8	1039.4	1041.0	1041.4	1041.6	1043.5	1042.8
15°	1064.9	1065.8	1066.4	1066.8	1067.9	1068.2	1069.2	1069.8	1070.4	1071.0	1071.4
17.5°	1084.6	1084.9	1085.9	1085.4	1087.0	1086.7	1087.8	1088.4	1088.9	1089.7	1090.2
20°	1093.8	1093.4	1093.5	1093.0	1093.0	1093.4	1093.5	1094.2	1093.8	1094.6	1095.3
22.5°	1095.4	1093.8	1092.8	1091.6	1091.2	1090.2	1090.2	1090.5	1089.4	1090.2	1091.2
25°	1094.6	1092.2	1090.4	1088.4	1086.6	1085.0	1083.9	1083.6	1082.8	1082.8	1083.6
27.5°	1097.9	1094.8	1092.2	1088.9	1086.6	1084.2	1082.1	1080.4	1078.8	1078.4	1078.4
30°	1107.7	1104.2	1101.2	1097.1	1093.5	1090.6	1087.6	1085.2	1082.1	1080.8	1079.3
32.5°	1126.9	1124.0	1119.9	1116.3	1112.0	1108.4	1104.4	1100.8	1097.1	1093.8	1092.5
35°	1157.8	1156.6	1154.2	1151.8	1147.6	1143.0	1139.8	1135.4	1131.3	1126.5	1125.2
37.5°	1206.8	1209.6	1208.2	1206.4	1205.2	1203.8	1199.3	1196.5	1193.7	1189.8	1188.9
40°	1267.3	1275.1	1282.8	1288.0	1286.2	1292.2	1293.2	1293.8	1291.3	1294.6	1295.2
42.5°	1345.4	1360.3	1374.4	1384.6	1396.4	1405.4	1416.9	1421.9	1431.3	1441.0	1446.6
45°	1427.5	1449.0	1469.1	1490.1	1510.7	1533.4	1555.2	1570.8	1593.4	1610.2	1620.8
47.5°	1517.1	1545.6	1569.6	1601.1	1630.9	1657.7	1696.1	1727.0	1754.6	1780.8	1808.4
50°	1611.9	1646.6	1676.3	1714.6	1750.9	1792.8	1838.0	1877.2	1920.5	1962.2	1999.4
52.5°	1711.4	1752.8	1792.9	1832.2	1876.2	1921.8	1970.7	2027.5	2079.4	2142.2	2187.3
55°	1813.5	1863.6	1906.3	1947.4	1994.2	2044.6	2102.8	2170.0	2235.8	2304.7	2373.0
57.5°	1897.5	1960.0	2006.7	2054.7	2105.0	2155.1	2227.2	2296.1	2379.6	2464.2	2549.7
60°	1956.1	2039.4	2096.0	2156.8	2215.0	2275.8	2353.6	2440.6	2545.1	2647.4	2763.7
62.5°	2021.5	2138.4	2217.8	2299.0	2369.8	2442.7	2546.8	2647.0	2781.2	2899.1	3045.4
65°	2116.9	2274.7	2391.5	2500.8	2596.0	2695.3	2818.6	2944.0	3097.6	3260.5	3443.9
67.5°	2163.1	2345.3	2498.4	2633.2	2754.8	2881.4	3008.7	3157.0	3330.0	3526.2	3727.6
69°	2069.7	2250.4	2426.4	2562.8	2690.7	2826.0	2962.2	3111.7	3282.1	3485.7	3699.2
70°	1940.6	2115.0	2302.0	2438.8	2567.9	2708.2	2846.9	2998.0	3161.0	3370.6	3586.6
72.5°	1468.4	1616.2	1797.8	1942.3	2078.0	2219.9	2362.6	2493.8	2659.0	2860.8	3059.8
75°	914.3	1015.6	1178.8	1324.0	1433.1	1554.6	1688.7	1812.8	1978.8	2121.8	2313.1
77.5°	489.2	538.4	633.6	737.6	798.4	857.7	945.0	1012.4	1082.2	1165.0	1244.0
80°	297.3	317.2	349.7	372.2	363.7	339.4	331.7	307.4	316.2	301.4	290.6
82.5°	252.4	265.8	285.6	299.2	289.2	250.4	206.6	173.9	150.8	128.6	109.3
85°	192.0	201.8	212.0	218.1	217.6	198.3	157.5	122.0	95.1	73.6	61.3
87.5°	75.2	80.2	87.6	86.6	90.3	91.0	71.2	55.0	39.2	26.4	23.1
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: P144535

CATALOG NUMBER: LDRL-RW-F02-E

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7
2.5°	952.0	951.8	952.0	952.5	952.5	952.8	952.5	952.6	952.2	951.7	952.0
5°	963.7	963.4	963.8	964.0	964.0	963.7	964.6	964.6	964.2	963.7	963.9
7.5°	983.8	984.0	983.5	985.2	983.7	983.8	984.8	984.7	984.4	984.5	984.7
10°	1011.9	1011.8	1012.1	1013.1	1011.6	1012.6	1013.8	1014.0	1013.2	1013.2	1013.4
12.5°	1043.0	1044.2	1044.4	1045.2	1045.1	1046.0	1046.1	1046.3	1046.9	1047.1	1046.1
15°	1072.7	1073.6	1074.4	1075.0	1074.2	1075.4	1076.6	1076.6	1076.5	1077.1	1076.2
17.5°	1091.0	1091.8	1093.0	1092.8	1093.0	1093.9	1094.8	1095.2	1095.5	1095.5	1095.6
20°	1096.8	1097.3	1097.9	1098.6	1098.9	1099.9	1100.6	1101.1	1101.4	1101.1	1101.3
22.5°	1092.2	1092.8	1094.2	1094.6	1094.8	1096.3	1096.9	1097.4	1097.8	1098.1	1097.6
25°	1084.2	1085.0	1086.2	1086.7	1087.0	1088.4	1089.2	1090.4	1090.7	1090.8	1091.0
27.5°	1078.8	1079.2	1080.1	1080.8	1081.0	1082.4	1083.6	1084.4	1084.6	1084.8	1084.7
30°	1079.0	1078.9	1080.1	1080.2	1080.1	1081.4	1082.1	1082.6	1082.9	1082.9	1083.1
32.5°	1090.4	1089.7	1090.7	1089.2	1089.4	1089.2	1089.0	1089.6	1089.2	1089.4	1088.7
35°	1122.6	1120.8	1119.2	1119.9	1117.6	1114.3	1116.2	1115.2	1113.5	1113.6	1114.1
37.5°	1184.3	1182.5	1184.2	1182.6	1183.2	1178.5	1179.6	1175.6	1174.4	1175.9	1171.6
40°	1293.9	1293.1	1296.2	1295.0	1295.8	1297.0	1298.2	1294.2	1287.6	1293.6	1293.8
42.5°	1445.8	1453.2	1456.2	1460.4	1464.8	1462.8	1466.8	1468.0	1460.6	1466.1	1467.5
45°	1636.4	1644.3	1653.6	1656.3	1663.6	1664.6	1667.6	1668.4	1661.8	1662.4	1663.9
47.5°	1836.0	1850.5	1861.4	1869.0	1876.6	1878.0	1879.7	1876.6	1877.0	1878.6	1878.6
50°	2032.1	2063.1	2082.4	2097.5	2110.6	2103.8	2109.6	2110.0	2112.0	2107.9	2110.4
52.5°	2238.3	2279.4	2311.8	2337.0	2345.0	2369.1	2359.2	2366.8	2371.9	2364.3	2369.3
55°	2439.8	2498.4	2550.4	2587.0	2612.8	2637.2	2641.0	2660.7	2658.4	2665.8	2662.5
57.5°	2631.3	2713.2	2787.5	2841.8	2878.8	2916.0	2941.4	2962.8	2965.0	2986.2	2974.2
60°	2863.0	2977.0	3072.6	3153.6	3208.2	3263.6	3307.4	3342.6	3350.6	3387.2	3375.1
62.5°	3175.5	3314.6	3436.8	3531.8	3653.4	3712.0	3797.2	3850.4	3883.6	3892.7	3909.7
65°	3614.8	3796.1	3957.2	4109.2	4246.0	4341.0	4439.5	4518.8	4582.3	4577.0	4603.1
67.5°	3941.2	4148.0	4342.0	4524.0	4671.3	4793.5	4906.8	4992.4	5049.2	5085.4	5100.8
69°	3907.2	4129.1	4343.1	4537.5	4689.5	4826.0	4936.3	5020.6	5085.8	5125.0	5136.4
70°	3794.1	4022.2	4245.2	4436.0	4590.9	4740.8	4853.1	4947.0	5009.0	5051.9	5058.5
72.5°	3281.8	3528.8	3726.1	3934.3	4083.4	4235.1	4305.8	4422.2	4502.9	4529.0	4528.5
75°	2475.3	2681.3	2854.6	3008.5	3142.0	3244.8	3278.2	3361.0	3428.0	3427.2	3421.0
77.5°	1332.9	1381.4	1446.4	1468.1	1509.2	1508.6	1467.3	1480.4	1518.3	1444.6	1468.4
80°	286.0	281.7	278.0	275.9	274.7	275.2	276.8	267.3	276.6	272.4	254.9
82.5°	99.6	97.2	94.9	96.6	95.4	96.4	96.1	97.2	97.1	96.8	94.4
85°	56.0	54.0	52.8	53.7	51.8	50.2	49.0	48.5	48.3	47.2	46.6
87.5°	21.3	21.2	21.0	20.2	18.2	16.6	15.7	13.7	12.9	11.8	10.9
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)