

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: P144544

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144544
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-F03-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (21) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6794.2 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

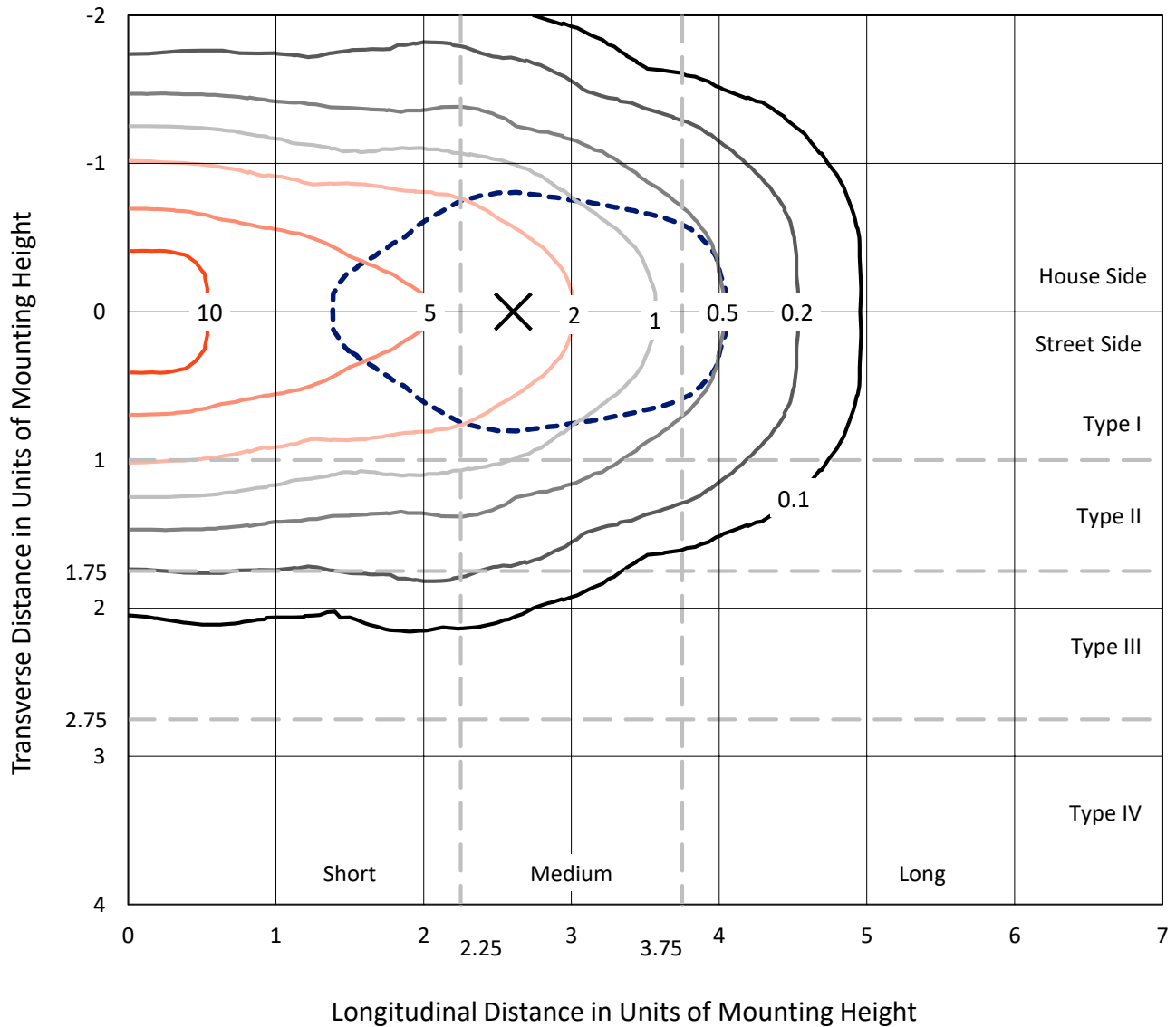
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P144544
 CATALOG NUMBER: LDRL-RW-F03-E-7030

Iso-Footcandle Lines of Horizontal Illumination

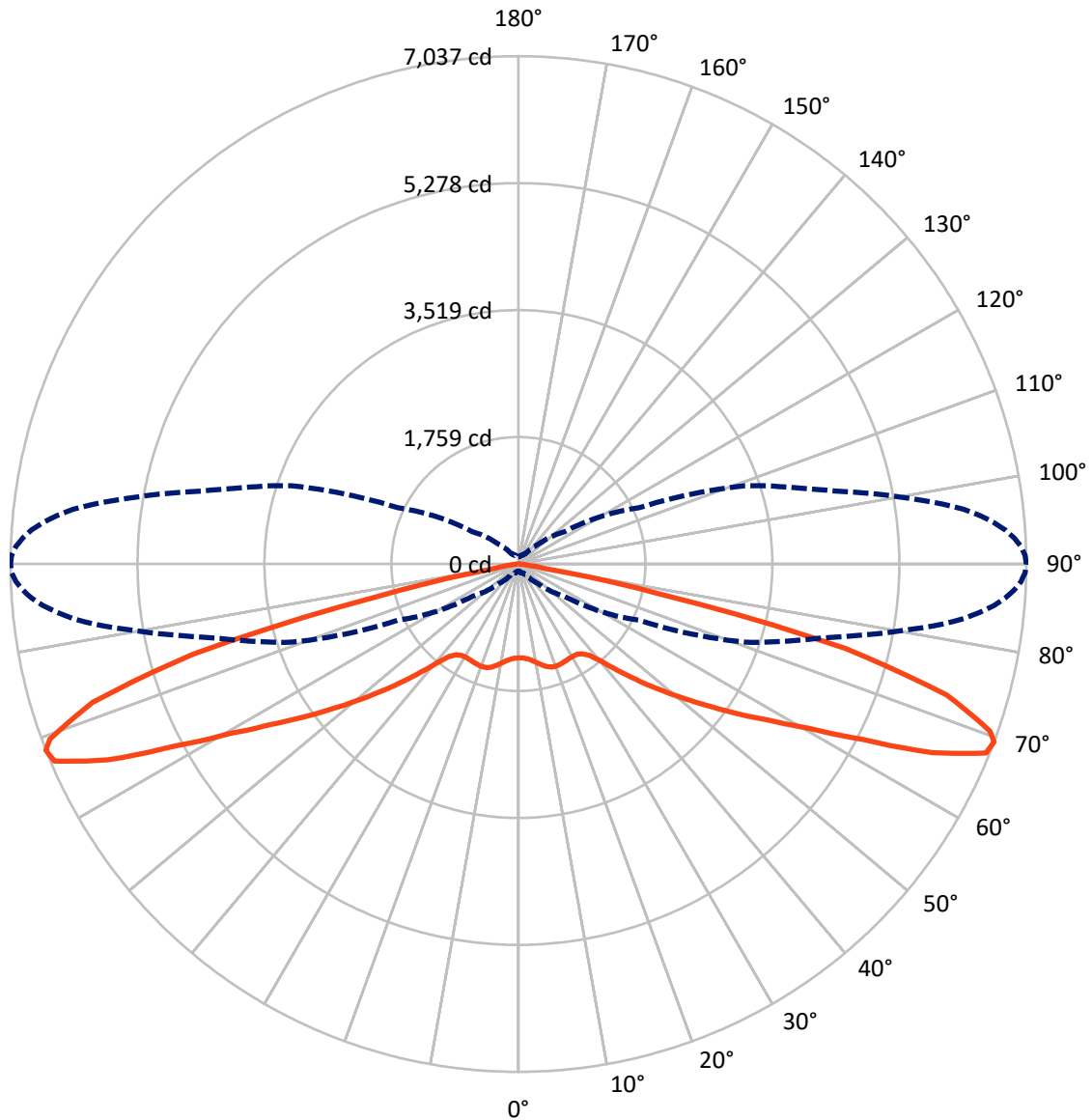
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.3 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P144544
CATALOG NUMBER: LDRL-RW-F03-E-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P144544

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3397.1	0.0	3397.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3397.1	0.0	3397.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	6794.2	0.0	6794.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	1.9
10°-20°	400.9	5.9
20°-30°	649.3	9.6
30°-40°	808.9	11.9
40°-50°	1007.0	14.8
50°-60°	1235.6	18.2
60°-70°	1523.9	22.4
70°-80°	947.3	13.9
80°-90°	94.1	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°	6794.2	100.0
0°-180°	6794.2	100.0



REPORT NUMBER: P144544

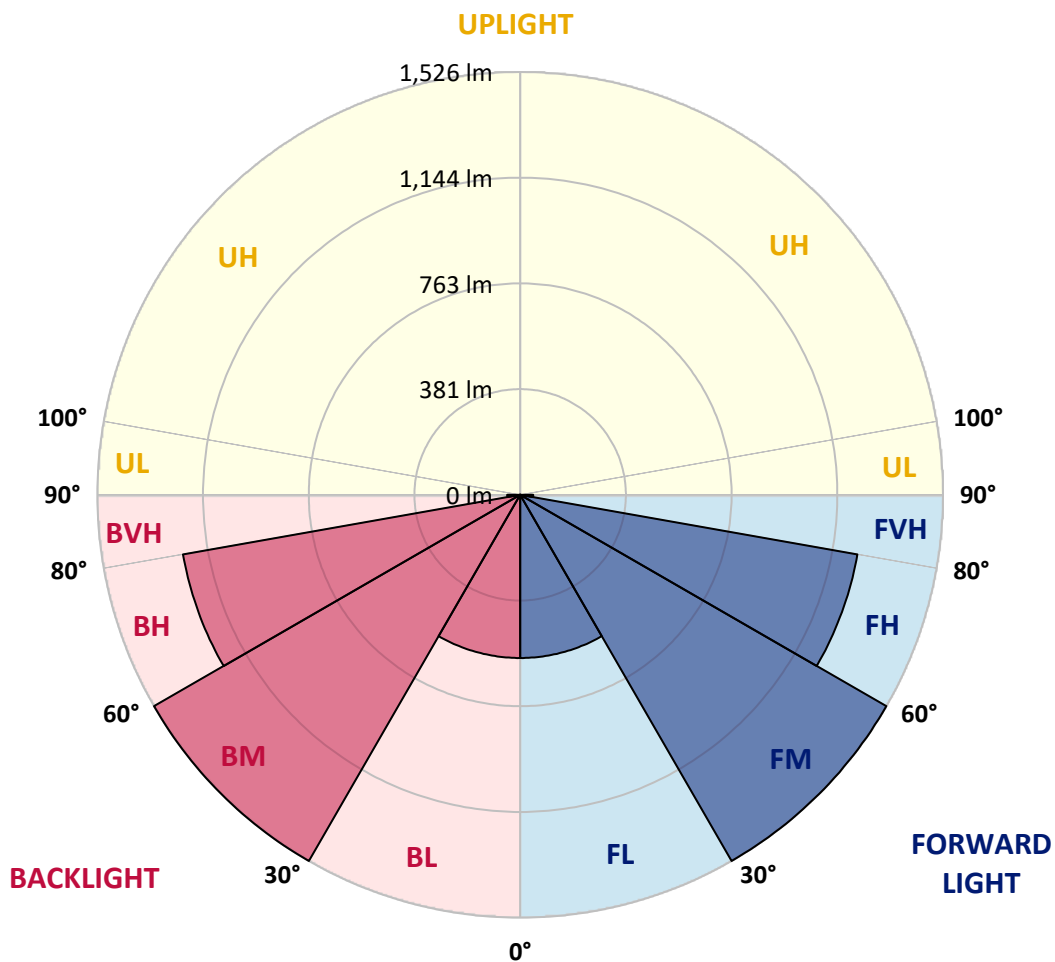
CATALOG NUMBER: LDRL-RW-F03-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	588.8	8.7			
FM (30°-60°)	1525.7	22.5			
FH (60°-80°)	1235.6	18.2			G1/1800
FVH (80°-90°)	47.0	0.7			G1/100
BL (0°-30°)	588.8	8.7	B2/1000		
BM (30°-60°)	1525.7	22.5	B2/2500		
BH (60°-80°)	1235.6	18.2	B3/2500		G3/2500
BVH (80°-90°)	47.0	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





REPORT NUMBER: P144544

CATALOG NUMBER: LDRL-RW-F03-E-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	1304.5	1303.2	1305.6	1307.9	1307.2	1307.6	1306.8	1305.6	1305.7	1305.8	1305.9
5°	1314.6	1313.3	1315.6	1317.6	1318.3	1319.9	1320.3	1319.6	1320.0	1320.3	1320.6
7.5°	1326.9	1325.8	1328.6	1331.4	1336.6	1339.4	1342.0	1344.8	1345.0	1345.2	1345.4
10°	1338.4	1337.7	1342.5	1348.4	1356.8	1363.1	1370.8	1378.2	1378.8	1379.4	1380.0
12.5°	1345.8	1345.9	1353.1	1363.8	1378.2	1391.2	1404.2	1416.9	1418.1	1419.3	1420.4
15°	1345.4	1346.4	1357.4	1376.9	1401.8	1424.6	1440.6	1454.4	1455.6	1456.7	1457.8
17.5°	1336.2	1336.4	1352.2	1383.2	1422.1	1456.0	1476.8	1484.3	1484.7	1485.1	1485.5
20°	1310.2	1311.9	1334.4	1379.4	1437.9	1484.8	1504.4	1501.3	1500.6	1499.9	1499.3
22.5°	1265.6	1267.8	1297.7	1358.1	1440.9	1503.3	1523.6	1509.4	1507.3	1505.1	1502.9
25°	1203.6	1207.4	1239.8	1317.2	1421.0	1508.8	1536.1	1513.2	1509.9	1506.5	1503.1
27.5°	1131.9	1133.8	1172.0	1253.2	1374.6	1490.6	1541.8	1521.2	1517.0	1512.7	1508.4
30°	1048.9	1053.6	1093.4	1178.2	1309.2	1448.6	1539.5	1536.6	1531.8	1527.0	1522.3
32.5°	966.4	970.4	1009.5	1100.9	1233.9	1390.0	1528.2	1559.8	1555.9	1551.9	1547.9
35°	883.1	888.0	928.4	1026.5	1159.0	1323.5	1510.4	1593.1	1591.4	1589.7	1588.0
37.5°	810.0	813.2	852.8	954.8	1093.4	1262.6	1487.0	1637.6	1641.6	1645.4	1649.4
40°	735.6	738.8	780.2	884.6	1033.0	1210.6	1465.6	1693.8	1704.4	1715.0	1725.7
42.5°	664.1	666.8	706.8	811.2	965.8	1165.6	1452.6	1761.6	1782.0	1802.4	1822.8
45°	590.8	592.6	630.2	731.8	889.2	1113.2	1449.3	1837.8	1867.3	1896.8	1926.2
47.5°	518.6	523.0	561.7	658.0	801.6	1038.0	1444.3	1922.2	1961.3	2000.3	2039.4
50°	449.6	454.4	494.2	585.6	717.0	948.9	1418.9	2017.9	2065.5	2113.1	2160.7
52.5°	379.3	384.0	423.9	511.2	638.6	848.4	1348.4	2118.3	2174.9	2231.5	2288.1
55°	304.2	306.0	347.0	434.6	560.1	764.4	1236.0	2210.4	2279.0	2347.5	2416.0
57.5°	221.2	227.3	267.8	349.2	480.0	689.9	1093.0	2257.4	2343.0	2428.6	2514.1
60°	159.7	163.8	199.3	263.3	389.3	616.8	966.1	2223.1	2337.3	2451.5	2565.6
62.5°	126.2	130.8	158.2	198.4	301.0	536.6	883.3	2128.8	2288.9	2449.1	2609.3
65°	111.7	115.8	141.2	161.0	230.2	454.0	831.2	2035.4	2251.6	2467.8	2684.0
67.5°	102.1	106.3	128.5	142.0	190.2	400.8	806.7	1964.8	2214.4	2464.1	2713.8
69°	97.5	101.4	121.7	134.4	179.4	382.8	780.2	1845.4	2092.9	2340.4	2588.0
70°	95.0	98.4	117.0	129.6	175.1	367.8	741.0	1703.3	1942.2	2181.0	2419.9
72.5°	88.0	90.2	105.8	117.6	160.1	293.6	559.0	1201.8	1404.3	1606.8	1809.3
75°	78.0	80.8	94.6	105.4	122.2	176.4	350.0	697.6	836.4	975.1	1113.8
77.5°	67.0	70.2	81.4	98.6	98.4	114.9	212.4	400.6	468.0	535.4	602.8
80°	57.5	60.2	70.4	97.5	82.3	91.0	158.3	298.8	325.9	353.1	380.2
82.5°	45.0	47.2	59.0	80.6	65.8	69.2	120.6	272.1	290.5	308.9	327.4
85°	28.2	29.2	43.0	55.6	46.8	41.8	77.6	209.5	222.9	236.3	249.7
87.5°	11.3	13.8	20.8	19.9	20.2	16.8	25.1	75.6	82.4	89.3	96.2
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: P144544

CATALOG NUMBER: LDRL-RW-F03-E-7030

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	1306.0	1306.1	1305.6	1304.9	1305.6	1305.0	1305.2	1305.8	1305.6	1305.6	1305.2
5°	1320.9	1321.2	1321.2	1319.8	1320.6	1320.8	1321.0	1320.5	1320.8	1321.2	1320.4
7.5°	1345.7	1345.9	1346.6	1347.2	1346.8	1347.0	1347.4	1347.0	1346.3	1347.9	1346.8
10°	1380.6	1381.1	1381.2	1383.2	1382.3	1383.0	1385.0	1385.0	1383.9	1385.4	1385.0
12.5°	1421.6	1422.8	1422.6	1422.4	1423.2	1423.9	1426.2	1426.6	1427.1	1429.6	1428.7
15°	1459.0	1460.1	1461.0	1461.4	1463.1	1463.5	1464.8	1465.8	1466.4	1467.4	1467.8
17.5°	1485.9	1486.4	1487.7	1487.0	1489.3	1488.8	1490.4	1491.1	1491.8	1492.9	1493.6
20°	1498.6	1497.9	1498.1	1497.4	1497.4	1497.9	1498.1	1499.0	1498.6	1499.7	1500.6
22.5°	1500.7	1498.6	1497.2	1495.6	1495.0	1493.6	1493.6	1494.0	1492.4	1493.6	1494.9
25°	1499.7	1496.3	1493.8	1491.1	1488.6	1486.4	1485.0	1484.6	1483.4	1483.4	1484.6
27.5°	1504.2	1499.9	1496.3	1491.8	1488.6	1485.4	1482.5	1480.2	1477.9	1477.6	1477.5
30°	1517.6	1512.8	1508.8	1503.0	1498.1	1494.1	1490.0	1486.8	1482.5	1480.7	1478.6
32.5°	1543.9	1540.0	1534.3	1529.3	1523.4	1518.5	1513.0	1508.1	1503.1	1498.6	1496.8
35°	1586.2	1584.5	1581.4	1578.0	1572.3	1565.9	1561.4	1555.6	1549.9	1543.4	1541.6
37.5°	1653.2	1657.2	1655.3	1652.8	1651.2	1649.2	1643.1	1639.2	1635.4	1630.0	1628.8
40°	1736.3	1747.0	1757.6	1764.6	1762.1	1770.4	1771.8	1772.5	1769.1	1773.6	1774.5
42.5°	1843.2	1863.6	1882.8	1896.9	1913.2	1925.4	1941.2	1948.0	1961.0	1974.2	1982.0
45°	1955.7	1985.2	2012.7	2041.4	2069.7	2100.7	2130.8	2152.0	2183.0	2206.1	2220.6
47.5°	2078.4	2117.4	2150.4	2193.4	2234.4	2271.0	2323.7	2366.0	2403.8	2439.8	2477.6
50°	2208.3	2255.9	2296.6	2349.1	2398.8	2456.2	2518.0	2571.9	2631.1	2688.4	2739.2
52.5°	2344.7	2401.3	2456.3	2510.1	2570.5	2633.0	2699.9	2777.8	2848.8	2934.9	2996.6
55°	2484.6	2553.1	2611.6	2668.0	2732.0	2801.2	2880.9	2972.9	3063.1	3157.5	3251.2
57.5°	2599.6	2685.2	2749.2	2815.0	2884.0	2952.6	3051.4	3145.8	3260.2	3376.0	3493.2
60°	2679.8	2794.0	2871.6	2954.8	3034.7	3117.9	3224.4	3343.7	3486.8	3627.1	3786.3
62.5°	2769.5	2929.7	3038.5	3149.6	3246.6	3346.6	3489.1	3626.4	3810.3	3971.8	4172.2
65°	2900.2	3116.4	3276.5	3426.2	3556.5	3692.7	3861.6	4033.4	4243.7	4467.0	4718.2
67.5°	2963.5	3213.1	3422.8	3607.6	3774.1	3947.6	4122.0	4325.2	4562.2	4830.9	5106.8
69°	2835.5	3083.0	3324.2	3511.0	3686.4	3871.6	4058.2	4263.2	4496.6	4775.5	5068.0
70°	2658.7	2897.6	3153.9	3341.2	3518.0	3710.4	3900.3	4107.3	4330.6	4617.8	4913.7
72.5°	2011.8	2214.2	2463.0	2661.0	2847.0	3041.2	3236.9	3416.5	3642.9	3919.3	4191.9
75°	1252.6	1391.4	1615.0	1813.9	1963.4	2129.9	2313.6	2483.6	2711.0	2906.8	3169.0
77.5°	670.2	737.7	868.2	1010.6	1093.9	1175.1	1294.8	1387.0	1482.8	1596.1	1704.4
80°	407.4	434.5	479.0	509.8	498.3	465.0	454.4	421.2	433.2	412.8	398.1
82.5°	345.8	364.2	391.4	409.9	396.3	343.2	283.0	238.2	206.6	176.2	149.8
85°	263.1	276.4	290.4	298.8	298.1	271.6	215.8	167.2	130.3	100.8	83.9
87.5°	103.0	109.9	120.1	118.5	123.8	124.6	97.5	75.4	53.6	36.2	31.6
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: P144544

CATALOG NUMBER: LDRL-RW-F03-E-7030

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	1304.2	1304.1	1304.2	1305.0	1304.9	1305.4	1304.9	1305.2	1304.5	1303.8	1304.3
5°	1320.4	1319.9	1320.4	1320.8	1320.8	1320.3	1321.4	1321.4	1321.0	1320.3	1320.5
7.5°	1347.9	1348.2	1347.4	1349.8	1347.7	1347.9	1349.3	1349.1	1348.6	1348.8	1349.0
10°	1386.4	1386.2	1386.6	1388.0	1385.9	1387.2	1388.8	1389.4	1388.2	1388.2	1388.4
12.5°	1428.9	1430.7	1430.9	1431.9	1431.8	1433.0	1433.2	1433.4	1434.3	1434.6	1433.2
15°	1469.6	1471.0	1471.9	1472.8	1471.6	1473.2	1475.1	1475.0	1474.9	1475.7	1474.4
17.5°	1494.7	1495.8	1497.4	1497.2	1497.4	1498.8	1499.9	1500.4	1500.8	1500.8	1501.1
20°	1502.6	1503.3	1504.2	1505.2	1505.6	1506.9	1507.8	1508.5	1508.9	1508.5	1508.7
22.5°	1496.3	1497.2	1499.0	1499.7	1500.0	1502.0	1502.8	1503.6	1503.9	1504.4	1503.8
25°	1485.4	1486.4	1488.2	1488.8	1489.3	1491.1	1492.2	1493.8	1494.2	1494.5	1494.7
27.5°	1477.9	1478.4	1479.8	1480.7	1480.9	1482.9	1484.6	1485.6	1485.9	1486.2	1486.1
30°	1478.2	1478.2	1479.8	1480.0	1479.8	1481.6	1482.5	1483.2	1483.6	1483.6	1483.9
32.5°	1493.8	1492.9	1494.2	1492.2	1492.4	1492.2	1492.0	1492.7	1492.2	1492.4	1491.5
35°	1538.0	1535.4	1533.4	1534.3	1531.2	1526.6	1529.1	1528.0	1525.4	1525.7	1526.4
37.5°	1622.5	1620.0	1622.3	1620.2	1621.0	1614.6	1616.2	1610.5	1609.0	1611.0	1605.1
40°	1772.7	1771.6	1775.8	1774.0	1775.2	1777.0	1778.6	1773.2	1764.2	1772.2	1772.5
42.5°	1980.8	1991.0	1995.0	2000.8	2006.8	2004.1	2009.6	2011.1	2001.2	2008.6	2010.4
45°	2241.9	2252.7	2265.4	2269.2	2279.2	2280.6	2284.6	2285.8	2276.6	2277.6	2279.6
47.5°	2515.4	2535.2	2550.2	2560.6	2571.0	2573.0	2575.2	2571.0	2571.6	2573.7	2573.7
50°	2784.0	2826.6	2853.0	2873.6	2891.5	2882.2	2890.2	2890.8	2893.5	2887.9	2891.3
52.5°	3066.6	3122.9	3167.2	3201.8	3212.7	3245.8	3232.2	3242.6	3249.6	3239.2	3245.9
55°	3342.5	3422.8	3494.1	3544.3	3579.6	3613.0	3618.2	3645.2	3642.0	3652.2	3647.7
57.5°	3604.9	3717.1	3818.9	3893.3	3944.0	3995.1	4029.7	4059.1	4062.1	4091.2	4074.7
60°	3922.2	4078.6	4209.6	4320.4	4395.2	4471.2	4531.2	4579.4	4590.4	4640.5	4623.9
62.5°	4350.5	4541.2	4708.5	4838.6	5005.3	5085.6	5202.4	5275.2	5320.6	5333.0	5356.4
65°	4952.4	5200.8	5421.5	5629.6	5817.1	5947.2	6082.2	6190.8	6277.9	6270.6	6306.4
67.5°	5399.6	5682.8	5948.6	6198.0	6399.8	6567.2	6722.4	6839.8	6917.6	6967.1	6988.2
69°	5353.0	5657.0	5950.2	6216.6	6424.7	6611.8	6762.8	6878.4	6967.6	7021.4	7037.0
70°	5198.0	5510.4	5816.0	6077.5	6289.6	6495.0	6648.8	6777.6	6862.4	6921.2	6930.3
72.5°	4496.2	4834.6	5104.8	5390.1	5594.4	5802.2	5899.0	6058.4	6169.1	6204.8	6204.2
75°	3391.2	3673.4	3911.0	4121.8	4304.6	4445.4	4491.2	4604.7	4696.5	4695.4	4686.8
77.5°	1826.1	1892.6	1981.5	2011.4	2067.6	2066.8	2010.2	2028.1	2080.1	1979.2	2011.8
80°	391.8	385.9	380.9	378.0	376.4	377.0	379.1	366.2	378.8	373.2	349.2
82.5°	136.4	133.2	130.0	132.3	130.8	132.1	131.6	133.2	133.0	132.6	129.4
85°	76.7	74.0	72.4	73.6	71.1	68.8	67.2	66.5	66.3	64.6	63.8
87.5°	29.2	29.0	28.7	27.6	24.9	22.8	21.5	18.8	17.6	16.0	14.9
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)