

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: P146625

Luminaire Tested: **LDRL-T3-F05-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146625  
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-F05-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (35) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12324.3 lumens  
Efficiency: N/A  
Efficacy: 92.5 lumens/watt  
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

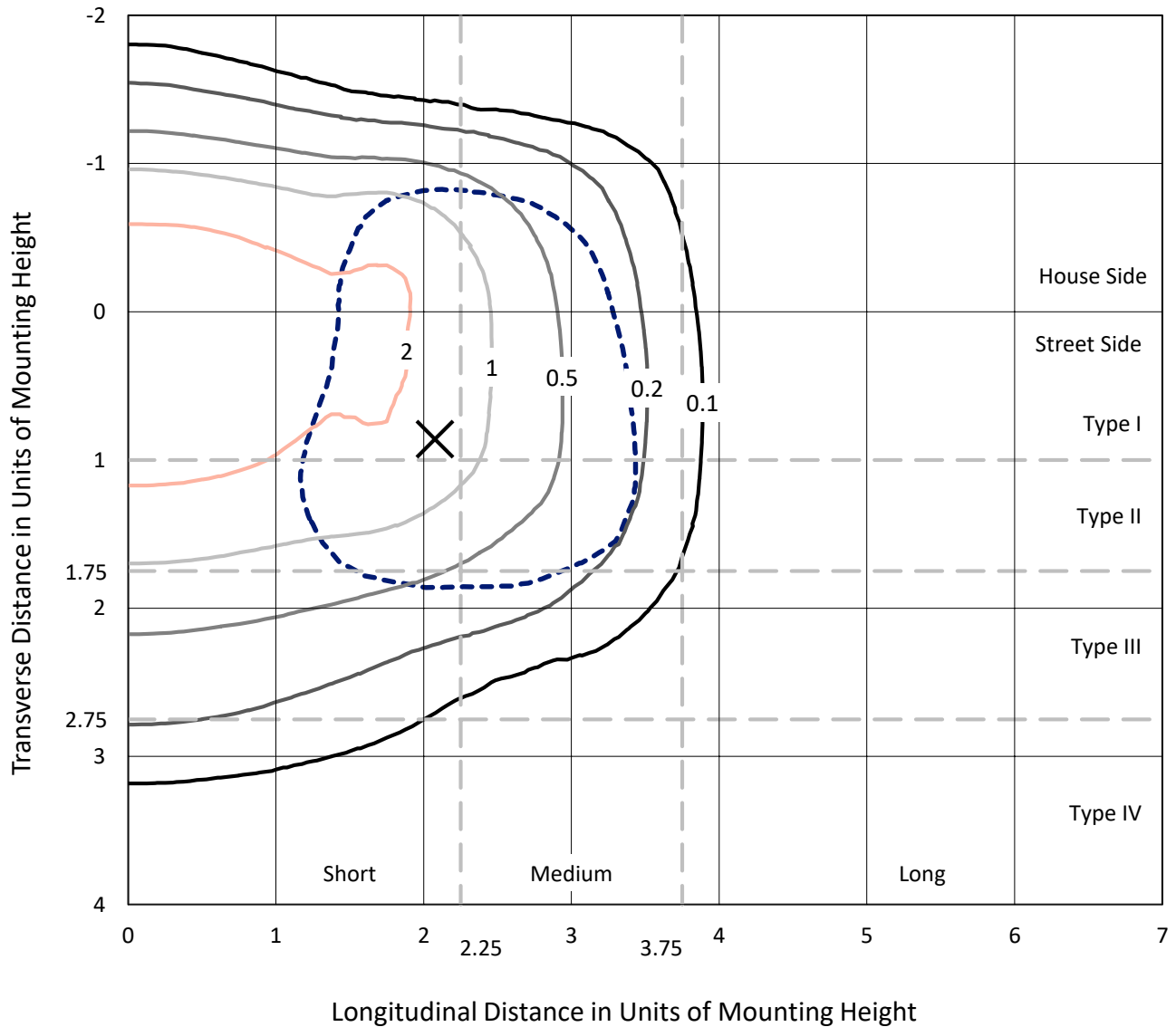
Input Watts (W): 133.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

### Iso-Footcandle Lines of Horizontal Illumination

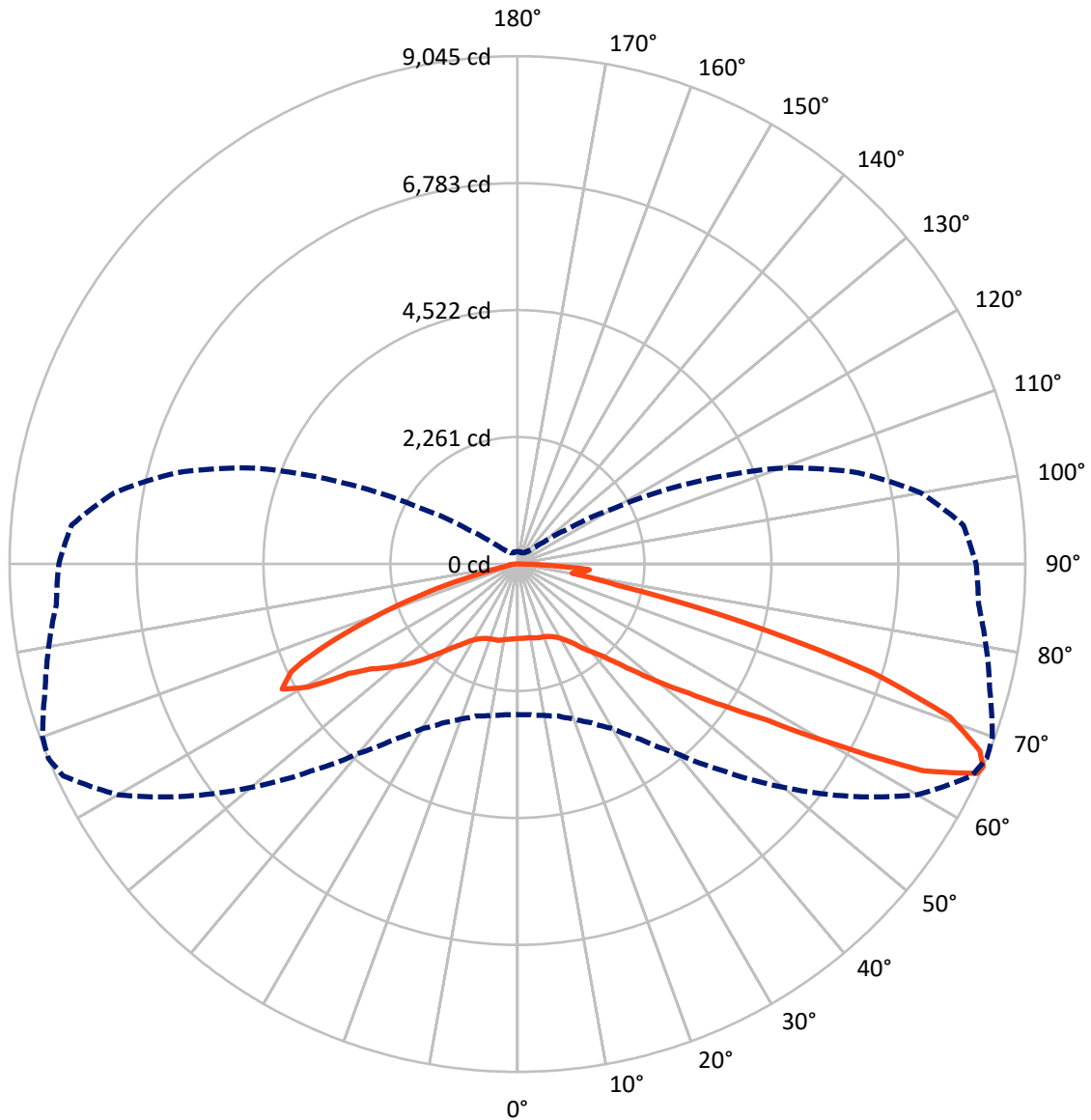
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.3 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P146625  
CATALOG NUMBER: LDRL-T3-F05-E

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

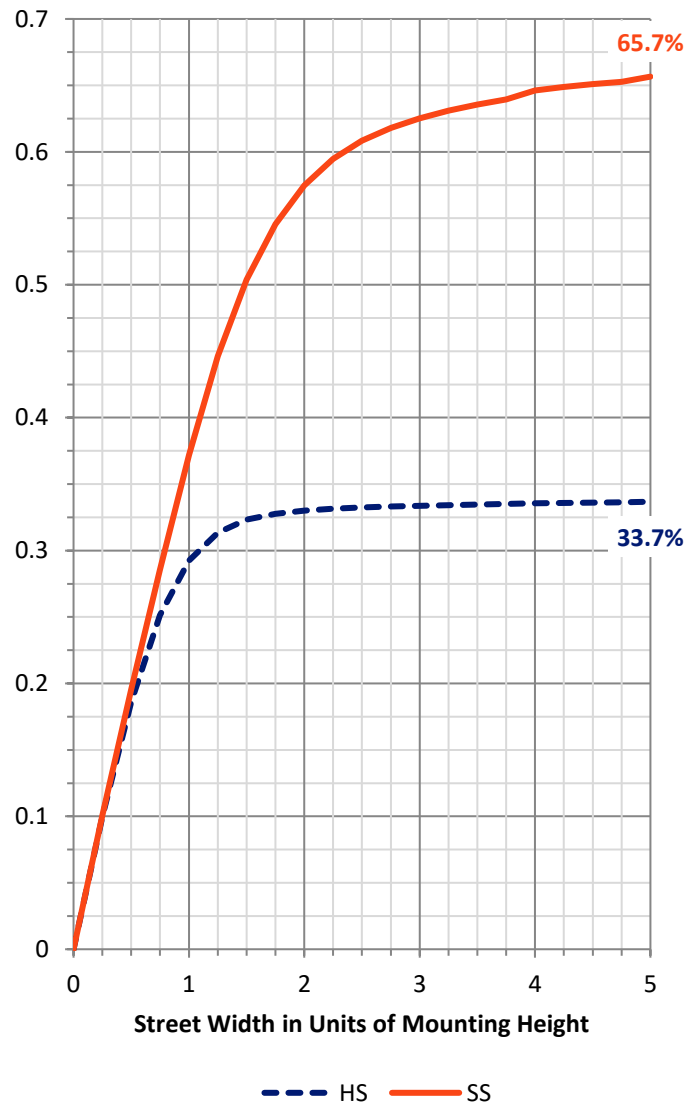
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4187.0	0.0	4187.0
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	8137.3	0.0	8137.3
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	12324.3	0.0	12324.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.4	1.0
10°-20°	377.6	3.1
20°-30°	649.1	5.3
30°-40°	1044.1	8.5
40°-50°	1720.9	14.0
50°-60°	2697.5	21.9
60°-70°	3733.1	30.3
70°-80°	1689.4	13.7
80°-90°	285.0	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°	12324.3	100.0
0°-180°	12324.3	100.0



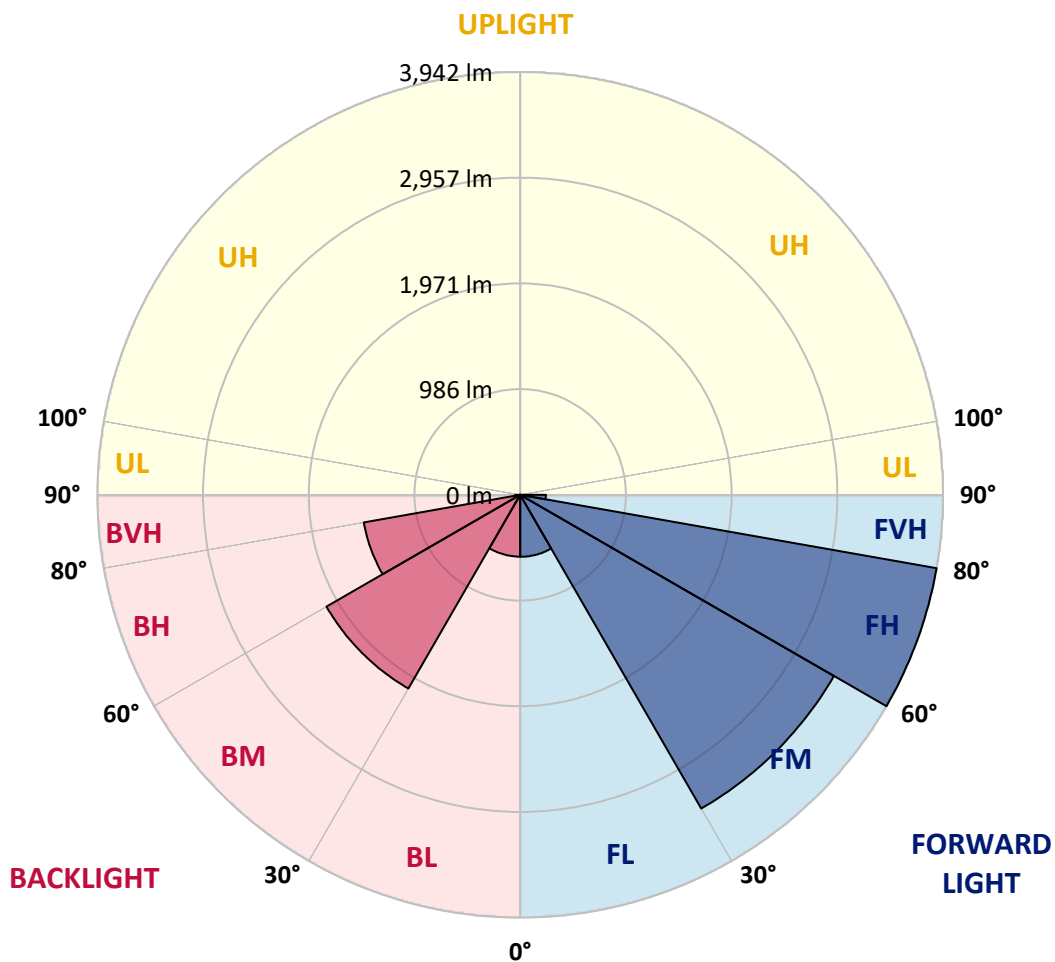
REPORT NUMBER: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	578.0	4.7			
FM	(30°-60°)	3377.3	27.4			
FH	(60°-80°)	3942.4	32.0			G2/5000
FVH	(80°-90°)	239.5	1.9			G3/500
BL	(0°-30°)	576.2	4.7	B2/1000		
BM	(30°-60°)	2085.1	16.9	B2/2500		
BH	(60°-80°)	1480.2	12.0	B3/2500		G3/2500
BVH	(80°-90°)	45.5	0.4			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 III Short





REPORT NUMBER: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6
2.5°	1325.0	1324.1	1323.3	1323.3	1322.5	1323.3	1324.1	1325.0	1324.1	1325.0	1324.1
5°	1322.5	1322.5	1321.7	1321.7	1321.7	1321.7	1322.5	1323.3	1322.5	1324.1	1322.5
7.5°	1311.8	1316.7	1315.1	1316.7	1318.4	1320.0	1320.8	1322.5	1325.0	1326.6	1325.0
10°	1297.7	1300.2	1301.0	1302.7	1306.0	1310.1	1313.4	1317.5	1323.3	1325.0	1326.6
12.5°	1272.1	1275.4	1277.9	1281.2	1286.2	1292.8	1298.6	1305.2	1315.1	1321.7	1327.4
15°	1253.1	1257.3	1258.1	1262.2	1267.2	1274.6	1282.0	1291.9	1305.2	1316.7	1328.3
17.5°	1265.5	1267.2	1265.5	1265.5	1267.2	1270.5	1276.3	1284.5	1298.6	1312.6	1326.6
20°	1302.7	1302.7	1301.0	1300.2	1298.6	1295.2	1294.4	1293.6	1302.7	1313.4	1325.8
22.5°	1338.2	1338.2	1337.4	1340.7	1339.8	1339.8	1337.4	1333.2	1329.1	1327.4	1335.7
25°	1360.5	1363.8	1365.4	1370.4	1373.7	1378.6	1380.3	1379.5	1373.7	1363.8	1361.3
27.5°	1396.8	1399.3	1400.9	1406.7	1413.3	1419.1	1424.9	1432.3	1432.3	1423.2	1410.8
30°	1467.0	1463.7	1465.3	1467.0	1472.7	1481.0	1488.4	1498.3	1503.3	1500.0	1483.5
32.5°	1532.2	1535.5	1537.1	1542.1	1547.9	1560.2	1569.3	1580.9	1591.6	1593.3	1585.0
35°	1627.9	1626.3	1623.8	1641.1	1647.7	1661.8	1672.5	1689.0	1697.3	1704.7	1699.8
37.5°	1779.0	1774.1	1770.8	1775.7	1784.8	1793.9	1809.6	1821.9	1836.0	1853.3	1847.5
40°	1992.8	2002.7	1988.7	1995.3	2002.7	1982.1	1996.1	2007.7	2031.6	2032.4	2031.6
42.5°	2271.0	2278.4	2275.1	2279.3	2266.1	2259.5	2253.7	2259.5	2289.2	2285.1	2265.2
45°	2549.2	2560.0	2557.5	2559.1	2584.7	2574.0	2583.1	2584.7	2615.3	2607.0	2592.1
47.5°	2787.0	2805.1	2809.3	2824.1	2858.8	2886.9	2925.7	2954.6	2969.4	2979.3	2990.9
50°	2975.2	2988.4	3011.5	3048.7	3099.0	3147.7	3235.2	3292.2	3344.2	3380.5	3417.7
52.5°	3099.8	3114.7	3150.2	3206.3	3279.0	3368.1	3470.5	3589.4	3699.2	3763.6	3818.9
55°	3151.0	3165.9	3209.6	3283.1	3379.7	3493.6	3640.6	3808.1	3954.3	4102.0	4187.1
57.5°	3121.3	3137.8	3188.2	3270.7	3387.1	3536.5	3719.0	3924.5	4138.4	4362.1	4533.0
60°	3033.8	3048.7	3105.6	3191.5	3324.4	3492.8	3711.6	3969.1	4269.6	4601.5	4925.9
62.5°	2913.3	2935.6	2985.9	3073.4	3205.5	3389.6	3638.9	3974.1	4405.0	4939.9	5571.5
65°	2759.7	2776.2	2820.8	2890.2	3035.5	3227.8	3491.1	3901.4	4464.4	5223.1	6124.6
66°	2680.5	2696.2	2737.4	2802.7	2935.6	3120.5	3383.8	3804.0	4398.4	5221.4	6183.2
67.5°	2541.0	2548.4	2578.1	2642.5	2729.2	2895.1	3139.5	3533.2	4118.5	5001.0	6019.7
70°	2131.5	2142.2	2171.1	2204.2	2236.3	2295.8	2466.7	2726.7	3194.8	4040.9	5012.6
72.5°	1474.4	1490.9	1522.3	1583.4	1633.7	1708.8	1775.7	1862.4	2017.6	2605.4	3586.1
75°	1065.8	1071.5	1117.8	1225.1	1326.6	1476.9	1609.8	1651.9	1599.0	1590.0	2106.7
77.5°	635.7	643.9	710.8	818.9	924.6	1128.5	1400.9	1611.4	1727.8	1686.5	1594.9
80°	267.5	279.0	318.7	346.7	434.2	605.1	874.2	1204.4	1511.5	1700.6	1657.7
82.5°	85.9	99.9	118.1	142.8	168.4	225.4	349.2	522.6	825.5	1230.9	1513.2
85°	31.4	32.2	44.6	61.9	68.5	79.3	101.5	156.8	279.0	461.5	858.5
87.5°	12.4	14.9	17.3	23.9	24.8	25.6	28.9	37.1	36.3	31.4	162.6
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: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6
2.5°	1325.0	1326.6	1325.8	1326.6	1326.6	1325.0	1325.0	1328.3	1325.8	1327.4	1327.4
5°	1324.1	1325.8	1325.0	1326.6	1326.6	1325.8	1325.8	1330.7	1329.9	1332.4	1334.0
7.5°	1327.4	1328.3	1327.4	1327.4	1329.9	1329.1	1329.9	1331.6	1335.7	1339.8	1343.1
10°	1331.6	1333.2	1335.7	1336.5	1339.8	1339.0	1341.5	1344.0	1348.1	1352.2	1356.3
12.5°	1337.4	1342.3	1349.7	1351.4	1354.7	1357.2	1361.3	1363.8	1367.1	1373.7	1378.6
15°	1342.3	1351.4	1360.5	1363.8	1367.1	1370.4	1374.5	1377.0	1382.8	1388.5	1394.3
17.5°	1344.0	1354.7	1366.2	1370.4	1373.7	1379.5	1384.4	1389.4	1396.0	1403.4	1410.0
20°	1344.8	1359.6	1374.5	1379.5	1386.9	1395.1	1403.4	1407.5	1416.6	1425.7	1431.5
22.5°	1352.2	1370.4	1391.0	1400.1	1407.5	1422.4	1433.1	1439.7	1450.4	1457.9	1460.4
25°	1372.8	1391.8	1416.6	1430.6	1443.0	1464.5	1477.7	1490.1	1495.9	1505.8	1503.3
27.5°	1410.0	1424.9	1457.1	1476.0	1491.7	1519.8	1545.4	1556.9	1566.0	1571.0	1565.2
30°	1473.6	1479.3	1514.8	1538.0	1564.4	1608.1	1636.2	1651.0	1662.6	1663.4	1648.6
32.5°	1568.5	1559.4	1590.8	1623.8	1658.5	1711.3	1749.3	1765.0	1774.1	1774.9	1741.9
35°	1697.3	1681.6	1708.0	1740.2	1783.1	1852.5	1900.4	1918.5	1932.6	1925.9	1877.2
37.5°	1859.9	1859.1	1871.5	1912.7	1961.4	2050.6	2101.0	2110.9	2110.0	2090.2	2016.8
40°	2040.7	2025.8	2027.5	2057.2	2113.3	2230.6	2300.7	2317.2	2311.5	2282.6	2186.8
42.5°	2268.5	2261.9	2239.6	2255.3	2307.3	2450.2	2535.2	2551.7	2556.7	2508.8	2395.7
45°	2588.0	2582.2	2532.7	2536.0	2574.0	2724.2	2812.6	2839.8	2840.6	2795.2	2648.3
47.5°	2975.2	2970.2	2912.5	2895.9	2914.9	3048.7	3158.5	3164.2	3165.9	3103.1	2950.4
50°	3414.4	3400.3	3356.6	3339.2	3317.0	3464.7	3553.1	3552.2	3543.2	3473.8	3302.1
52.5°	3838.7	3870.1	3853.6	3819.7	3820.5	3927.0	4010.4	3964.2	3969.9	3903.9	3706.6
55°	4291.9	4372.0	4432.2	4444.6	4438.8	4493.3	4539.6	4457.0	4426.5	4415.7	4206.0
57.5°	4773.2	4977.9	5163.7	5241.3	5211.5	5311.4	5352.7	5266.8	5268.5	5352.7	5171.9
60°	5416.3	5933.0	6401.1	6546.4	6614.1	6779.2	6705.7	6700.8	6830.4	6939.4	6604.2
62.5°	6392.0	7248.1	7995.2	8103.4	8157.8	8195.0	8162.0	8072.0	8205.7	8218.9	7702.1
65°	7131.7	8136.4	8858.7	8994.1	8984.2	8795.1	8611.9	8431.9	8430.3	8298.2	7632.8
66°	7211.8	8220.6	8924.7	9044.5	9000.7	8709.3	8476.5	8242.9	8167.7	7969.6	7294.3
67.5°	7036.8	8073.6	8772.9	8880.2	8786.9	8343.6	8026.6	7710.4	7597.3	7321.6	6633.1
70°	6015.6	7083.8	8019.1	8174.3	8063.7	7475.1	7005.4	6657.9	6349.9	6078.3	5510.4
72.5°	4664.2	5463.3	6453.1	6614.9	6624.0	6163.4	5634.2	5300.7	4942.4	4670.0	4244.0
75°	3059.4	3663.7	4207.7	4153.2	4168.9	3806.5	3491.1	3213.8	2889.3	2674.7	2471.6
77.5°	1788.1	2004.4	1954.8	1819.5	1705.5	1340.7	959.3	658.8	574.6	599.3	676.1
80°	1554.5	1433.1	1121.9	986.5	897.3	609.2	327.7	231.1	203.1	205.6	217.9
82.5°	1673.3	1736.1	1424.9	1173.1	1022.8	717.4	385.5	192.3	138.7	161.8	178.3
85°	1298.6	1652.7	1523.9	1287.8	1083.1	762.8	393.8	122.2	82.6	110.6	139.5
87.5°	369.8	585.3	468.1	413.6	333.5	227.8	94.1	48.7	44.6	57.8	80.1
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: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6	1326.6
2.5°	1328.3	1328.3	1330.7	1331.6	1332.4	1332.4	1334.0	1334.0	1334.9	1338.2	1337.4
5°	1336.5	1339.0	1342.3	1344.0	1346.4	1347.3	1349.7	1349.7	1352.2	1354.7	1353.9
7.5°	1346.4	1348.9	1351.4	1353.9	1356.3	1359.6	1358.8	1358.0	1357.2	1355.5	1353.9
10°	1360.5	1362.9	1365.4	1364.6	1362.9	1361.3	1354.7	1347.3	1344.0	1337.4	1332.4
12.5°	1383.6	1386.1	1383.6	1377.0	1367.9	1357.2	1343.1	1330.7	1323.3	1313.4	1307.6
15°	1400.9	1403.4	1398.4	1386.9	1372.0	1358.0	1339.0	1323.3	1310.1	1299.4	1291.1
17.5°	1414.1	1412.5	1401.7	1388.5	1372.8	1361.3	1344.0	1326.6	1310.9	1296.1	1284.5
20°	1433.1	1424.0	1408.3	1391.8	1376.2	1366.2	1352.2	1336.5	1320.0	1298.6	1283.7
22.5°	1457.9	1441.4	1420.7	1404.2	1389.4	1379.5	1365.4	1350.6	1334.9	1310.1	1289.5
25°	1493.4	1467.0	1443.0	1425.7	1412.5	1402.6	1385.2	1369.5	1352.2	1327.4	1301.0
27.5°	1542.9	1504.9	1480.2	1462.8	1449.6	1438.1	1415.8	1396.8	1374.5	1349.7	1318.4
30°	1607.3	1561.1	1533.8	1519.0	1504.9	1488.4	1464.5	1436.4	1407.5	1374.5	1340.7
32.5°	1687.4	1635.4	1609.8	1594.9	1576.8	1554.5	1523.1	1485.9	1443.0	1399.3	1357.2
35°	1801.3	1741.9	1713.8	1688.2	1661.8	1628.8	1581.7	1528.0	1471.1	1414.1	1362.1
37.5°	1914.4	1859.1	1824.4	1798.0	1756.7	1703.1	1637.8	1563.5	1487.6	1414.9	1352.2
40°	2074.5	2010.2	1969.7	1922.6	1855.8	1772.4	1677.5	1577.6	1483.5	1396.0	1321.7
42.5°	2271.0	2197.5	2137.3	2052.3	1948.2	1827.7	1696.5	1569.3	1454.6	1353.9	1272.1
45°	2519.5	2423.7	2323.0	2189.3	2030.0	1861.6	1695.6	1540.4	1405.0	1291.1	1210.2
47.5°	2809.3	2674.7	2505.5	2301.6	2083.6	1869.8	1669.2	1488.4	1330.7	1205.3	1112.0
50°	3107.3	2912.5	2672.2	2388.2	2110.9	1849.2	1610.6	1403.4	1233.3	1090.5	989.8
52.5°	3474.6	3172.5	2823.3	2446.9	2099.3	1788.1	1513.2	1283.7	1102.1	962.6	847.0
55°	3912.2	3471.3	2966.9	2479.1	2048.1	1678.3	1365.4	1126.8	936.1	809.0	705.0
57.5°	4636.1	3939.4	3212.1	2526.9	1947.4	1514.8	1185.5	938.6	759.5	651.3	568.0
60°	5884.3	4899.5	3730.5	2645.0	1807.9	1282.0	956.8	735.5	587.8	501.1	442.5
62.5°	6755.3	5481.5	4009.6	2604.5	1571.0	1009.6	707.5	525.9	428.4	371.5	331.9
65°	6586.0	5252.0	3673.6	2212.4	1230.9	714.1	470.5	355.8	300.5	265.0	245.2
66°	6282.2	4998.6	3417.7	1986.2	1067.4	595.2	388.0	294.7	258.4	232.8	219.6
67.5°	5728.3	4473.5	2957.9	1594.1	799.1	439.2	294.7	229.5	209.7	196.5	187.4
70°	4742.6	3537.4	2036.6	941.9	422.7	246.0	187.4	169.2	160.2	154.4	153.5
72.5°	3636.4	2537.7	1178.0	455.7	226.2	163.5	143.6	137.0	133.7	132.1	132.1
75°	2246.3	1431.5	526.7	228.7	156.0	133.7	124.7	121.4	120.5	120.5	120.5
77.5°	790.0	498.6	236.1	167.6	137.0	120.5	113.1	111.4	113.1	113.1	113.1
80°	217.9	192.3	170.9	148.6	123.8	111.4	104.8	104.0	107.3	108.1	104.8
82.5°	170.1	160.2	146.1	132.9	113.1	101.5	98.2	99.9	101.5	99.1	94.1
85°	145.3	138.7	102.4	102.4	91.6	88.3	87.5	89.2	88.3	81.7	75.1
87.5°	82.6	72.6	55.3	60.3	64.4	66.0	55.3	59.4	58.6	52.0	48.7
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: P146625  
 CATALOG NUMBER: LDRL-T3-F05-E

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1326.6	1326.6	1326.6	1326.6	1326.6
2.5°	1339.0	1339.0	1340.7	1340.7	1339.8
5°	1355.5	1355.5	1358.0	1356.3	1357.2
7.5°	1352.2	1348.9	1348.9	1347.3	1346.4
10°	1329.1	1323.3	1320.0	1321.7	1319.2
12.5°	1302.7	1297.7	1294.4	1293.6	1292.8
15°	1286.2	1280.4	1277.9	1276.3	1276.3
17.5°	1277.1	1270.5	1267.2	1264.7	1263.9
20°	1273.0	1264.7	1259.8	1257.3	1255.6
22.5°	1274.6	1264.7	1258.1	1254.8	1253.1
25°	1281.2	1268.8	1260.6	1256.4	1254.0
27.5°	1292.8	1276.3	1267.2	1261.4	1258.1
30°	1306.8	1283.7	1270.5	1262.2	1258.9
32.5°	1315.9	1284.5	1268.0	1255.6	1252.3
35°	1314.2	1275.4	1254.0	1238.3	1235.8
37.5°	1297.7	1251.5	1225.1	1204.4	1202.0
40°	1262.2	1215.2	1184.6	1164.0	1159.0
42.5°	1212.7	1164.0	1131.0	1112.0	1105.4
45°	1140.0	1080.6	1050.1	1034.4	1025.3
47.5°	1037.7	981.5	947.7	934.5	922.9
50°	921.3	859.4	834.6	819.7	806.5
52.5°	784.2	731.4	712.4	698.4	687.7
55°	651.3	614.2	591.9	577.0	577.9
57.5°	523.4	501.1	488.7	473.0	474.7
60°	411.9	392.9	392.9	383.0	379.7
62.5°	314.5	307.1	304.6	301.3	295.5
65°	238.6	238.6	239.4	239.4	236.1
66°	214.6	217.1	220.4	220.4	216.3
67.5°	185.7	189.0	192.3	194.0	194.0
70°	153.5	157.7	159.3	161.0	160.2
72.5°	134.6	137.9	137.9	138.7	137.0
75°	122.2	123.8	124.7	123.0	122.2
77.5°	113.1	113.9	113.1	112.3	111.4
80°	102.4	101.5	99.1	95.8	94.9
82.5°	88.3	85.0	83.4	78.4	77.6
85°	71.0	66.9	63.6	57.0	53.7
87.5°	47.1	45.4	42.9	31.4	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)