

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: P146854

Luminaire Tested: **LDRL-T4-F02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146854
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33696)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T4-F02-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4431.4 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

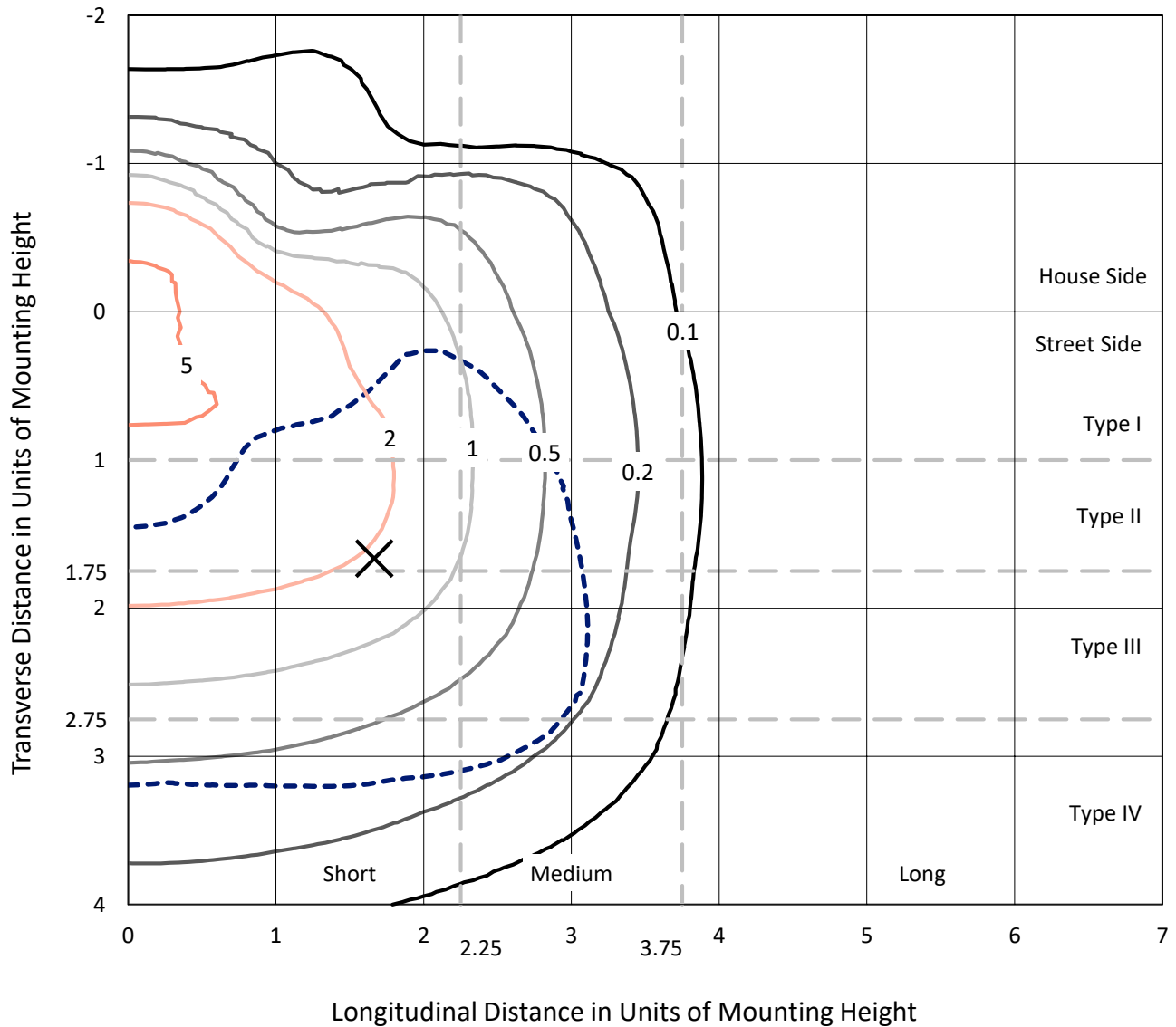
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P146854
 CATALOG NUMBER: LDRL-T4-F02-E-7030

Iso-Footcandle Lines of Horizontal Illumination

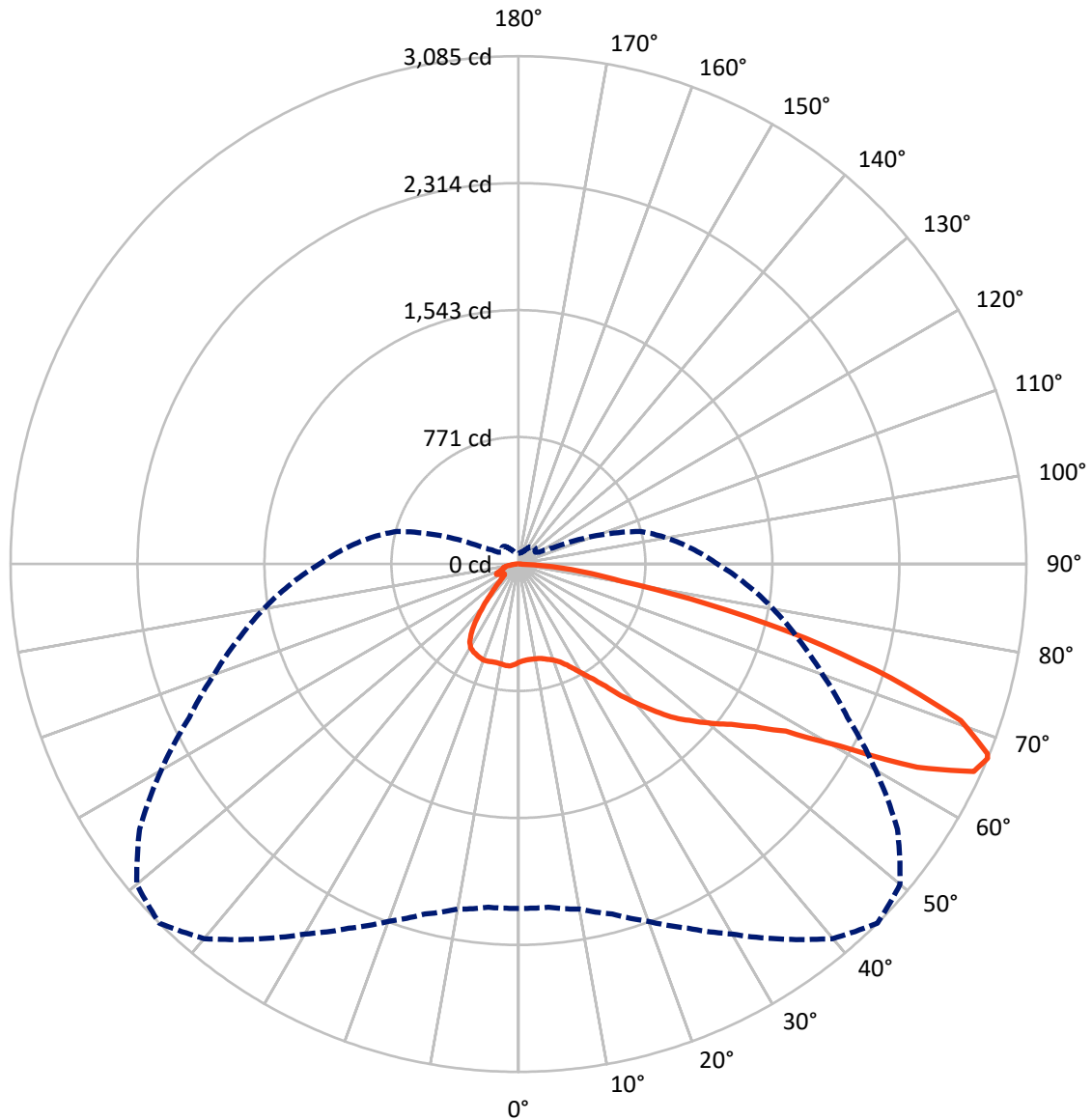
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P146854
CATALOG NUMBER: LDRL-T4-F02-E-7030

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P146854

CATALOG NUMBER: LDRL-T4-F02-E-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	897.9	0.0	897.9
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	3533.5	0.0	3533.5
	% Fixture	79.7	0.0	79.7
Total	Lumens	4431.4	0.0	4431.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.3
10°-20°	172.6	3.9
20°-30°	293.4	6.6
30°-40°	441.0	10.0
40°-50°	573.4	12.9
50°-60°	787.3	17.8
60°-70°	1242.0	28.0
70°-80°	750.4	16.9
80°-90°	113.7	2.6
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°	4431.4	100.0
0°-180°	4431.4	100.0

Coefficient of Utilization



REPORT NUMBER: P146854

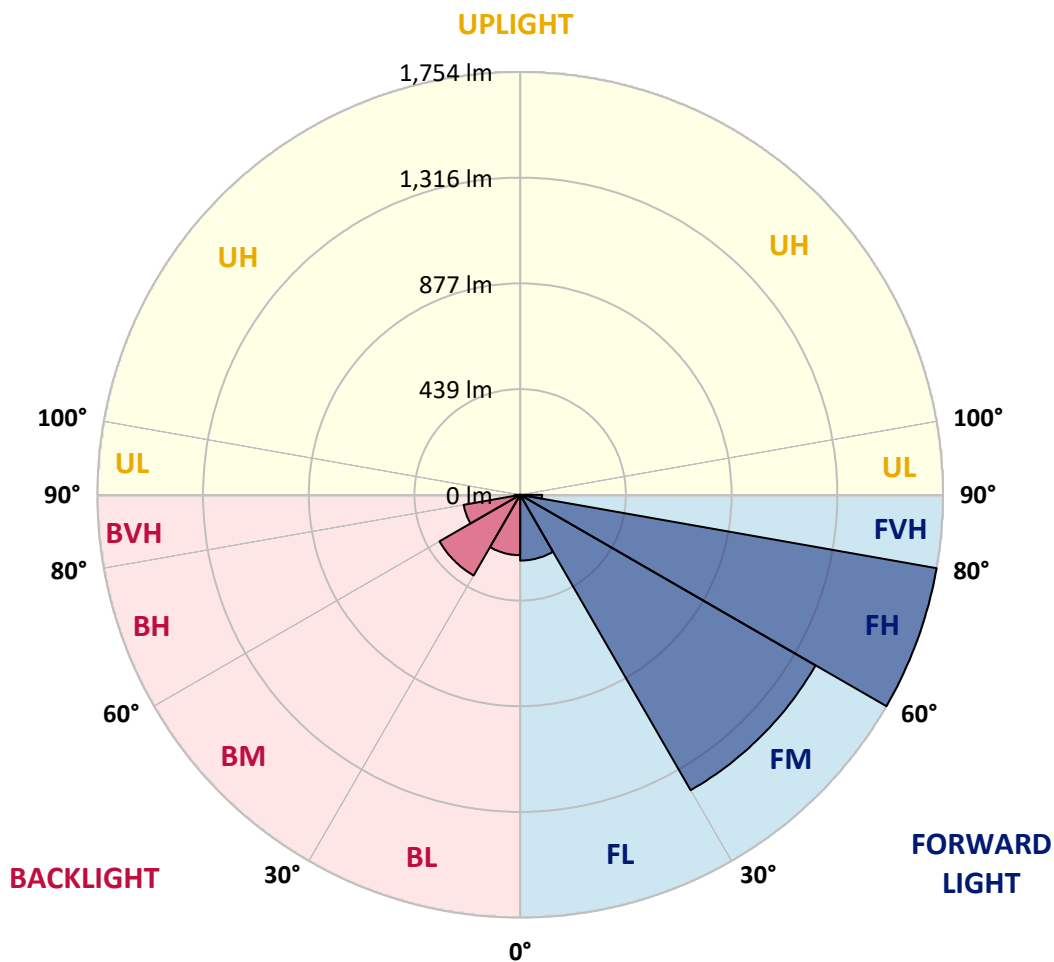
CATALOG NUMBER: LDRL-T4-F02-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	272.9	6.2			
FM	(30°-60°)	1415.3	31.9			
FH	(60°-80°)	1754.5	39.6			G1/1800
FVH	(80°-90°)	90.8	2.0			G1/100
BL	(0°-30°)	250.7	5.7	B1/500		
BM	(30°-60°)	386.4	8.7	B1/1000		
BH	(60°-80°)	237.9	5.4	B1/500		G1/500
BVH	(80°-90°)	22.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





REPORT NUMBER: P146854

CATALOG NUMBER: LDRL-T4-F02-E-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6
2.5°	583.3	584.5	583.6	583.6	583.9	584.2	584.8	586.0	586.3	588.1	588.4
5°	571.5	571.8	571.8	572.1	573.9	575.4	577.0	579.1	580.9	584.2	586.3
7.5°	567.3	568.5	568.2	568.8	570.6	572.1	573.9	577.0	581.5	584.2	587.2
10°	574.2	575.1	574.2	574.5	574.8	576.4	577.0	579.1	582.7	585.1	587.8
12.5°	590.2	590.2	589.3	588.7	587.8	588.1	586.9	586.6	588.4	588.7	589.0
15°	611.3	613.8	610.7	608.3	607.1	605.9	602.0	600.5	600.2	597.5	594.8
17.5°	632.8	633.4	631.5	628.8	627.0	624.3	621.0	618.0	614.4	610.1	604.7
20°	656.6	656.9	654.5	650.5	648.4	645.1	640.9	635.8	631.2	624.6	618.6
22.5°	689.8	689.5	684.6	681.3	678.3	674.4	668.3	661.4	654.2	646.3	637.9
25°	727.8	727.8	724.4	719.0	717.5	711.8	705.1	697.0	689.5	678.3	668.0
27.5°	771.2	771.5	765.5	762.4	759.1	753.1	748.6	742.2	732.0	720.8	710.3
30°	822.8	821.2	816.4	810.1	808.9	804.1	797.7	793.2	780.5	772.7	760.9
32.5°	871.6	874.0	872.8	865.6	866.8	862.0	856.5	853.2	839.9	832.4	821.6
35°	944.6	946.7	948.5	945.8	947.3	944.6	940.1	931.3	920.5	910.5	895.4
37.5°	1001.3	1003.4	1004.6	1011.3	1020.9	1030.3	1034.5	1030.0	1030.6	1015.5	995.3
40°	1047.7	1052.9	1060.1	1072.8	1092.1	1109.9	1119.5	1127.1	1131.0	1116.8	1090.6
42.5°	1094.2	1099.6	1109.6	1129.8	1156.3	1182.0	1202.2	1225.4	1229.6	1226.0	1203.7
45°	1142.8	1149.1	1161.5	1184.4	1215.4	1248.9	1281.5	1314.4	1330.9	1333.7	1306.5
47.5°	1201.3	1210.3	1221.8	1247.7	1277.9	1315.6	1356.3	1398.5	1424.4	1424.4	1393.1
50°	1274.2	1284.5	1294.2	1320.1	1350.3	1389.2	1436.2	1483.3	1518.5	1520.7	1482.7
52.5°	1376.5	1378.0	1383.7	1407.6	1433.8	1477.2	1521.9	1576.4	1617.2	1619.0	1575.2
55°	1500.7	1500.7	1507.4	1527.3	1551.7	1587.6	1633.8	1694.4	1737.2	1746.6	1690.5
57.5°	1664.2	1670.2	1673.6	1696.8	1713.4	1751.4	1790.0	1856.0	1910.6	1916.7	1859.6
60°	1930.2	1918.8	1937.2	1957.7	1996.6	2024.3	2090.1	2156.4	2226.1	2242.7	2181.5
62.5°	2192.3	2204.7	2227.3	2264.4	2331.0	2393.2	2487.3	2588.0	2696.3	2718.6	2671.9
65°	2208.6	2216.1	2247.5	2311.4	2402.5	2513.2	2642.9	2794.6	2956.0	3039.5	2961.1
67°	2091.6	2093.7	2129.3	2202.0	2311.1	2442.3	2595.8	2781.0	2970.4	3085.3	3026.8
67.5°	2054.5	2058.4	2093.4	2167.6	2278.0	2412.2	2568.7	2759.0	2952.9	3073.0	3020.2
70°	1836.7	1836.7	1874.4	1949.2	2052.7	2183.6	2347.3	2539.5	2750.3	2851.3	2806.4
72.5°	1563.5	1553.5	1596.1	1652.8	1737.2	1851.5	1983.3	2135.0	2293.6	2367.2	2349.4
75°	1136.4	1155.1	1177.1	1219.1	1292.3	1382.5	1459.7	1595.1	1719.7	1801.1	1779.7
77.5°	620.1	627.3	688.2	713.3	777.5	844.5	929.2	1024.2	1122.2	1173.5	1152.7
80°	368.6	382.7	418.9	448.8	483.5	534.4	596.0	616.8	636.1	634.9	597.2
82.5°	232.8	250.0	289.2	314.9	333.0	362.5	396.0	422.2	428.0	399.6	355.9
85°	37.7	62.4	163.2	191.8	203.3	219.3	244.0	255.2	238.3	208.1	215.6
87.5°	14.8	17.8	49.8	63.0	66.7	35.0	60.6	71.2	36.2	18.4	41.6
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: P146854

CATALOG NUMBER: LDRL-T4-F02-E-7030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6
2.5°	590.2	591.7	593.2	595.1	595.7	597.2	599.9	599.6	601.7	602.6	604.1
5°	589.0	592.3	594.8	598.1	599.3	602.6	606.2	607.4	610.1	612.2	614.1
7.5°	591.4	595.1	598.1	602.0	604.7	607.4	610.1	613.4	615.9	617.4	618.6
10°	592.3	596.3	599.9	603.2	606.2	608.3	611.3	614.1	616.5	617.4	617.7
12.5°	592.6	595.4	599.0	602.6	605.3	608.0	610.1	613.1	615.0	615.3	614.7
15°	595.1	595.4	597.8	602.0	604.7	607.4	608.9	610.4	611.6	610.7	609.8
17.5°	602.3	600.2	600.2	602.3	603.8	605.0	605.3	605.0	603.8	602.0	600.5
20°	614.1	609.8	606.5	605.3	602.9	599.9	596.0	592.3	587.8	585.7	585.4
22.5°	632.4	626.1	620.1	614.1	606.2	597.5	588.4	580.6	574.2	570.9	571.2
25°	663.8	654.5	647.5	637.0	624.3	611.9	600.2	589.6	582.1	576.1	577.3
27.5°	706.0	695.5	689.5	677.4	662.9	647.2	633.4	618.9	608.0	600.5	602.0
30°	755.5	752.5	742.5	730.5	716.9	699.1	678.3	656.6	637.0	624.6	622.2
32.5°	815.2	811.9	801.0	790.8	773.3	753.7	726.5	692.2	661.4	637.9	627.6
35°	888.8	880.7	867.4	857.4	837.8	812.5	777.5	731.1	684.3	649.0	623.4
37.5°	980.5	960.3	938.3	912.3	883.4	852.6	812.2	757.9	700.0	649.9	604.4
40°	1068.0	1035.4	998.9	957.9	922.6	885.5	843.6	781.4	710.6	643.6	575.7
42.5°	1165.4	1114.7	1065.2	1008.8	962.4	918.4	870.4	798.0	712.7	626.4	538.7
45°	1259.2	1194.0	1127.7	1058.0	998.9	950.0	895.4	812.2	712.1	608.3	501.9
47.5°	1342.7	1264.9	1182.9	1104.4	1035.7	982.0	922.3	831.5	720.2	603.2	477.4
50°	1420.8	1330.9	1234.7	1147.6	1072.8	1017.9	956.4	862.0	745.2	615.0	473.8
52.5°	1501.4	1403.6	1293.6	1199.8	1121.6	1058.0	995.9	900.9	780.2	639.1	482.0
55°	1606.3	1494.1	1376.8	1272.7	1183.2	1114.7	1042.9	947.9	817.9	667.1	497.3
57.5°	1762.5	1631.3	1498.0	1386.1	1282.7	1197.3	1118.6	1009.7	880.4	709.4	531.1
60°	2043.0	1897.7	1743.2	1597.0	1477.8	1378.0	1277.9	1142.8	995.6	805.3	608.6
62.5°	2501.1	2300.0	2086.5	1894.0	1730.3	1595.1	1454.0	1291.7	1120.1	921.7	725.9
65°	2776.5	2499.0	2227.3	2004.1	1810.5	1637.4	1466.7	1292.3	1126.2	952.7	778.7
67°	2810.6	2506.3	2205.6	1967.9	1760.4	1571.9	1386.7	1208.5	1059.8	914.4	764.2
67.5°	2800.3	2491.8	2185.1	1945.0	1735.4	1552.9	1370.8	1188.3	1043.5	898.2	753.4
70°	2598.3	2296.4	1993.0	1759.5	1558.7	1372.0	1199.8	1017.0	905.1	801.0	675.9
72.5°	2156.4	1920.9	1666.6	1472.1	1298.7	1137.0	985.6	832.7	742.8	669.2	581.2
75°	1599.1	1383.1	1168.1	1051.1	916.6	787.2	670.1	557.1	522.4	504.9	453.0
77.5°	987.4	793.5	631.5	525.7	418.0	327.5	260.6	212.0	221.1	257.3	273.9
80°	491.6	363.1	281.1	223.5	180.7	146.0	107.1	78.4	93.8	111.3	126.1
82.5°	295.9	233.7	184.9	156.5	127.3	98.3	69.7	53.1	58.8	79.0	86.9
85°	183.7	147.2	117.6	98.3	81.4	60.3	39.5	39.2	41.6	52.5	60.0
87.5°	54.0	36.5	29.0	30.2	33.5	27.7	20.8	17.8	22.0	30.2	33.8
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: P146854

CATALOG NUMBER: LDRL-T4-F02-E-7030

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6	596.6
2.5°	604.4	606.5	607.4	607.7	608.0	609.8	609.8	611.6	612.2	612.2	612.8
5°	615.9	618.0	618.9	619.2	619.8	620.7	620.4	621.6	622.2	621.9	621.9
7.5°	620.1	620.7	620.7	621.6	622.5	621.6	621.0	621.6	621.3	621.6	621.6
10°	618.6	618.0	618.0	617.4	618.3	616.5	616.5	617.1	616.8	617.4	618.3
12.5°	615.0	614.7	613.8	613.4	614.7	613.4	613.8	614.7	615.3	616.5	618.0
15°	609.8	608.9	608.9	610.1	613.1	614.1	615.3	616.8	617.1	617.7	618.3
17.5°	601.1	602.6	606.2	610.4	616.2	618.3	618.9	618.0	615.0	612.5	610.1
20°	589.0	595.7	605.0	614.1	621.0	620.7	616.8	611.0	603.8	598.7	595.4
22.5°	578.8	591.7	606.2	617.1	621.6	615.9	606.8	598.1	589.6	582.1	575.4
25°	586.0	598.4	610.7	617.4	617.1	607.1	595.1	585.4	573.9	563.4	552.2
27.5°	609.5	617.1	620.7	618.6	612.2	599.0	585.7	572.1	557.4	544.7	531.7
30°	625.5	625.5	621.9	613.4	602.3	587.5	571.2	553.7	536.2	521.5	506.7
32.5°	620.4	608.6	598.1	586.6	573.9	558.0	539.3	520.3	500.4	483.2	470.5
35°	598.1	572.7	550.7	534.4	521.2	502.2	480.4	458.7	442.4	430.7	423.4
37.5°	558.3	517.8	485.9	466.0	445.5	425.9	400.8	390.9	376.4	369.2	366.4
40°	510.0	450.9	410.8	385.1	363.4	339.0	322.1	315.8	310.3	308.8	307.6
42.5°	454.5	380.6	333.0	306.4	280.2	262.4	254.8	250.9	250.0	250.0	251.5
45°	396.9	309.1	254.2	232.8	211.1	201.8	200.0	198.1	198.5	197.5	198.1
47.5°	352.3	248.2	191.8	172.2	161.1	158.0	155.9	155.3	155.3	153.8	152.0
50°	329.0	207.5	150.5	135.1	128.8	126.7	126.7	125.5	123.1	121.5	117.6
52.5°	323.0	186.4	130.3	117.0	111.6	109.8	108.0	106.2	102.5	99.2	94.7
55°	327.8	179.8	124.0	111.6	105.6	103.4	101.9	98.9	93.8	89.0	83.8
57.5°	348.0	184.0	126.4	113.1	107.7	106.2	104.7	100.1	93.8	86.9	81.1
60°	403.2	203.9	136.6	121.2	116.7	117.0	114.9	109.2	100.1	90.2	81.7
62.5°	474.4	231.6	149.9	132.7	132.1	135.1	135.1	125.2	110.4	95.3	83.8
65°	515.1	240.4	151.7	134.2	139.3	148.1	147.5	134.2	114.0	95.3	82.9
67°	504.9	231.0	144.2	125.5	131.5	141.4	140.2	127.6	108.6	91.4	80.5
67.5°	496.7	228.0	142.4	123.4	129.4	137.5	137.5	124.9	106.2	90.2	79.6
70°	437.3	201.5	133.3	115.2	115.2	117.3	115.8	106.8	94.1	82.9	76.0
72.5°	364.6	176.1	126.1	109.5	103.7	102.5	100.4	94.1	86.0	78.1	72.1
75°	282.6	155.9	120.3	103.4	95.9	93.2	91.1	86.3	79.9	73.3	68.2
77.5°	197.8	133.6	112.8	98.3	90.2	88.1	84.7	79.3	74.2	68.5	63.6
80°	122.8	110.4	98.3	88.7	80.2	77.2	73.0	68.2	63.9	60.6	57.0
82.5°	87.5	81.1	73.3	68.2	59.4	50.4	54.0	54.3	51.6	49.5	48.6
85°	58.5	52.8	48.9	44.3	39.2	35.3	36.2	38.9	39.2	38.3	38.3
87.5°	32.0	27.1	26.2	27.1	23.5	22.3	22.6	25.0	25.3	25.3	25.6
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: P146854

CATALOG NUMBER: LDRL-T4-F02-E-7030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	596.6	596.6	596.6	596.6
2.5°	613.1	614.1	613.8	614.4
5°	622.5	623.1	622.8	623.1
7.5°	621.0	622.2	622.8	621.9
10°	618.6	620.4	621.6	621.6
12.5°	619.2	622.2	624.0	624.0
15°	618.6	621.0	621.6	621.6
17.5°	609.2	609.2	609.5	608.3
20°	592.9	591.1	590.5	588.4
22.5°	569.7	565.5	562.8	561.3
25°	543.2	536.5	532.3	529.9
27.5°	521.2	515.4	511.2	508.8
30°	496.7	490.1	487.7	485.9
32.5°	461.4	455.1	453.3	451.8
35°	415.6	413.5	408.7	405.3
37.5°	362.5	359.8	358.0	356.8
40°	307.0	307.3	305.8	303.1
42.5°	251.5	254.5	251.5	250.9
45°	197.5	200.9	200.9	201.8
47.5°	152.3	151.7	152.9	153.2
50°	115.2	113.4	112.8	111.9
52.5°	91.4	89.3	88.1	86.6
55°	80.5	78.1	76.9	76.6
57.5°	76.9	73.9	72.1	71.8
60°	76.0	71.8	69.4	68.8
62.5°	76.0	70.9	68.2	67.3
65°	75.1	70.0	67.6	66.7
67°	73.9	69.4	67.0	66.4
67.5°	73.3	69.1	67.0	66.0
70°	71.8	68.2	65.7	64.8
72.5°	68.5	65.4	63.0	62.4
75°	64.8	62.1	60.6	60.0
77.5°	60.6	58.2	56.4	54.9
80°	54.3	51.6	48.9	48.3
82.5°	46.1	43.1	41.0	40.7
85°	37.1	34.7	32.3	32.3
87.5°	25.9	24.4	22.9	21.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)