

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: P146588

Luminaire Tested: **LDRL-T3-E02-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146588  
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-E02-E-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (42) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5040 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

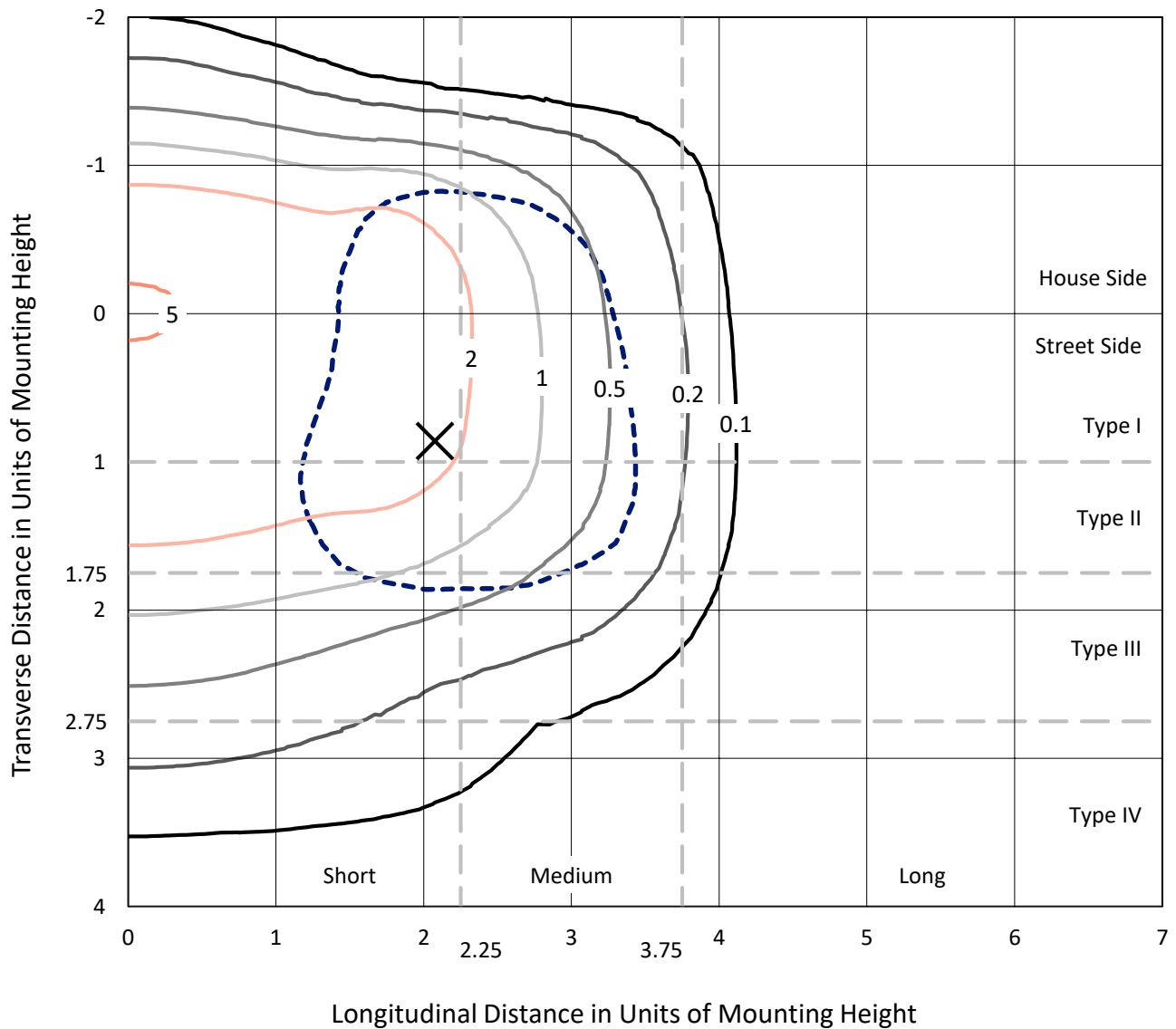
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P146588  
 CATALOG NUMBER: LDRL-T3-E02-E-8030

### Iso-Footcandle Lines of Horizontal Illumination

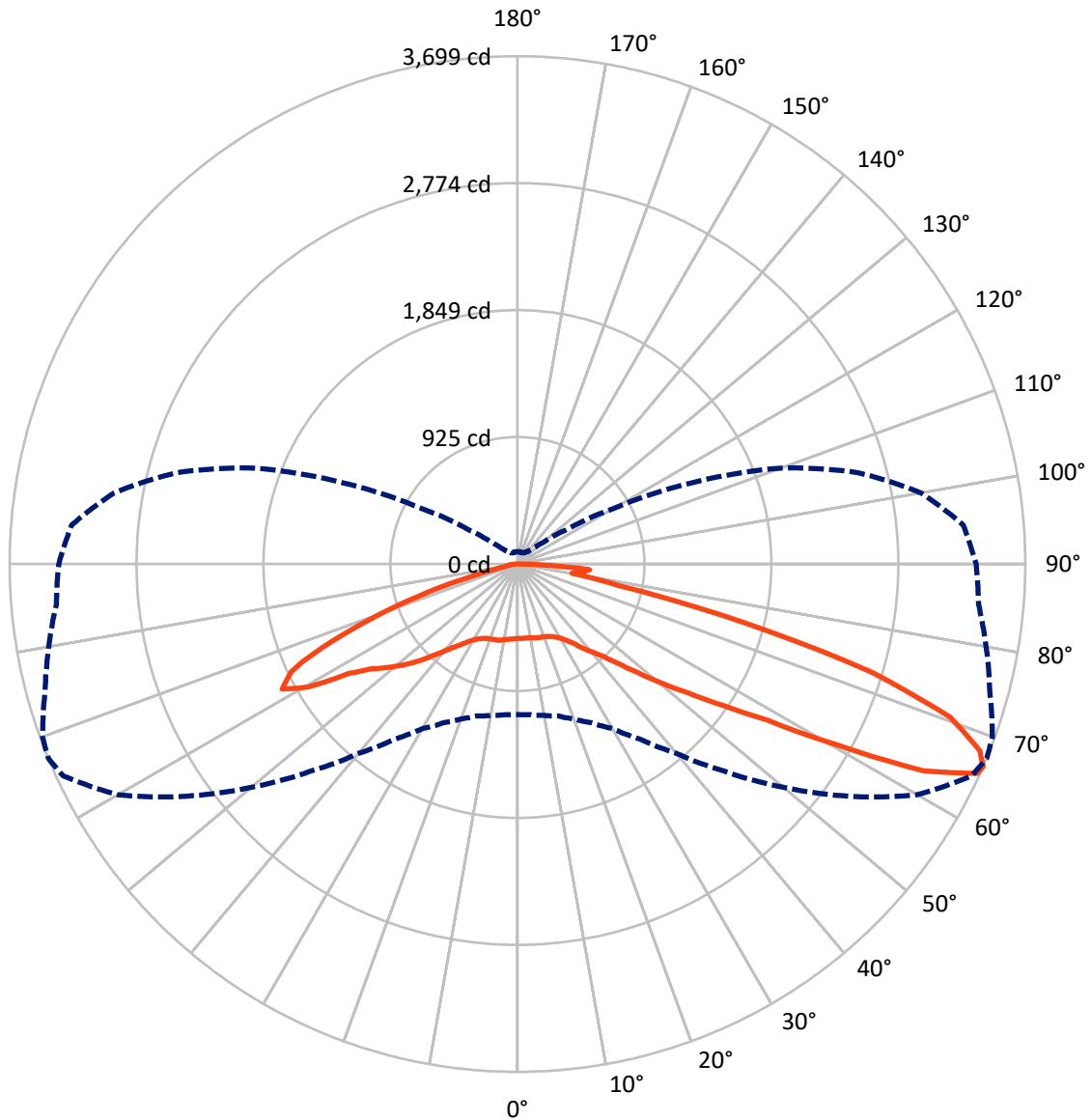
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P146588  
CATALOG NUMBER: LDRL-T3-E02-E-8030

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P146588

CATALOG NUMBER: LDRL-T3-E02-E-8030

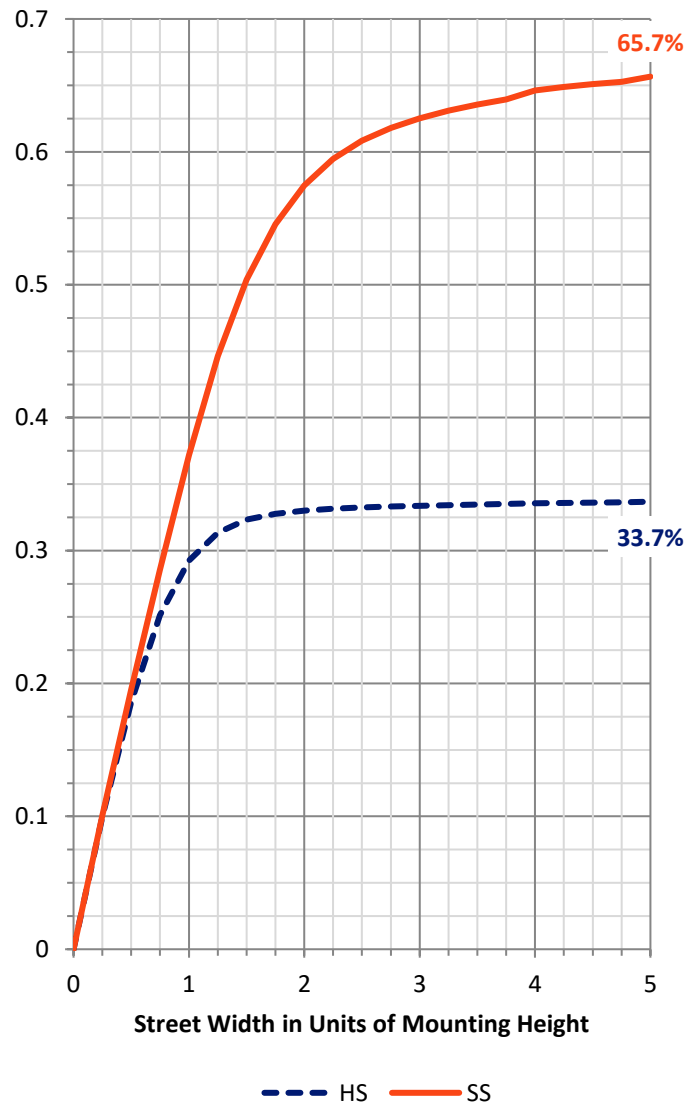
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1712.3	0.0	1712.3
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	3327.7	0.0	3327.7
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	5040.0	0.0	5040.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.0
10°-20°	154.4	3.1
20°-30°	265.5	5.3
30°-40°	427.0	8.5
40°-50°	703.8	14.0
50°-60°	1103.1	21.9
60°-70°	1526.7	30.3
70°-80°	690.9	13.7
80°-90°	116.6	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°	5040.0	100.0
0°-180°	5040.0	100.0



REPORT NUMBER: P146588

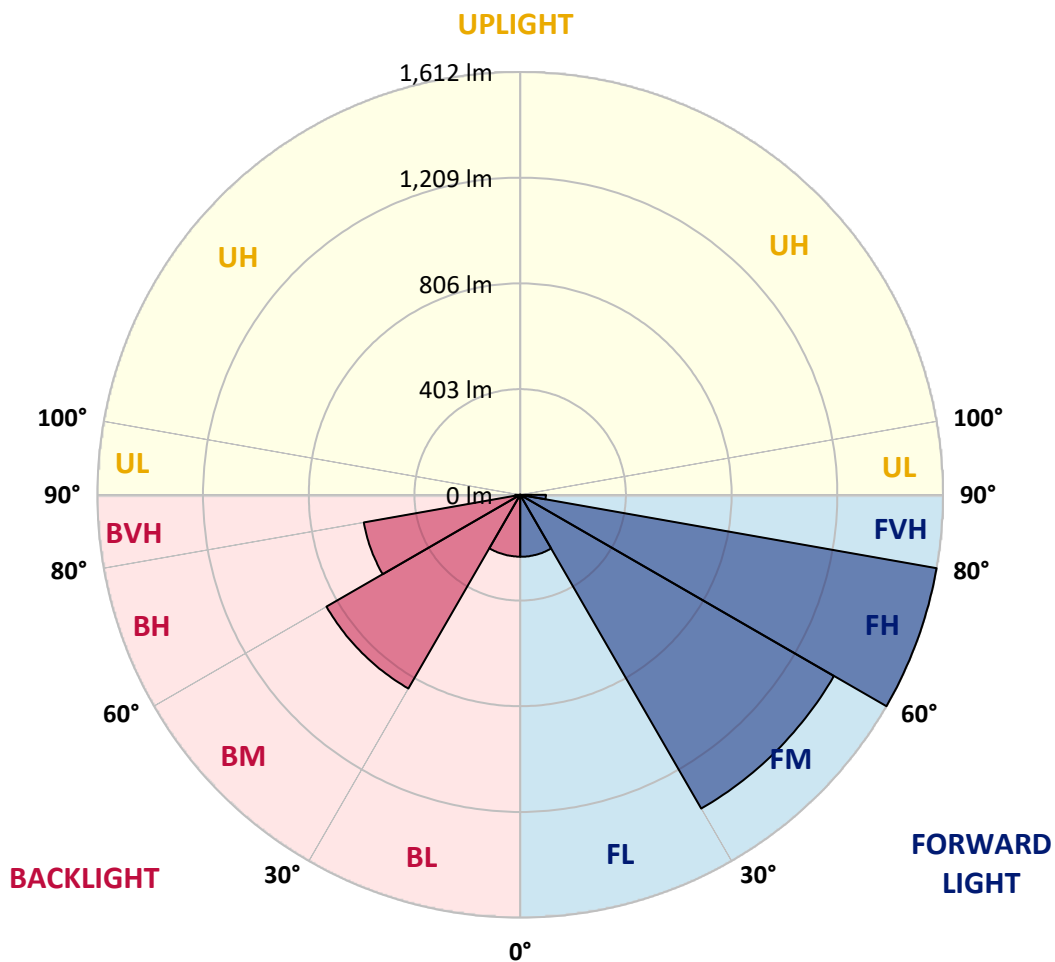
CATALOG NUMBER: LDRL-T3-E02-E-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	236.4	4.7			
FM	(30°-60°)	1381.2	27.4			
FH	(60°-80°)	1612.2	32.0			G1/1800
FVH	(80°-90°)	98.0	1.9			G1/100
BL	(0°-30°)	235.6	4.7	B1/500		
BM	(30°-60°)	852.7	16.9	B1/1000		
BH	(60°-80°)	605.3	12.0	B2/1000		G2/1000
BVH	(80°-90°)	18.6	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: P146588

CATALOG NUMBER: LDRL-T3-E02-E-8030

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5
2.5°	541.8	541.5	541.2	541.2	540.8	541.2	541.5	541.8	541.5	541.8	541.5
5°	540.8	540.8	540.5	540.5	540.5	540.5	540.8	541.2	540.8	541.5	540.8
7.5°	536.4	538.5	537.8	538.5	539.1	539.8	540.2	540.8	541.8	542.5	541.8
10°	530.7	531.7	532.1	532.7	534.1	535.8	537.1	538.8	541.2	541.8	542.5
12.5°	520.2	521.6	522.6	523.9	526.0	528.7	531.0	533.7	537.8	540.5	542.9
15°	512.5	514.2	514.5	516.2	518.2	521.2	524.3	528.3	533.7	538.5	543.2
17.5°	517.5	518.2	517.5	517.5	518.2	519.6	521.9	525.3	531.0	536.8	542.5
20°	532.7	532.7	532.1	531.7	531.0	529.7	529.4	529.0	532.7	537.1	542.2
22.5°	547.2	547.2	546.9	548.3	547.9	547.9	546.9	545.2	543.5	542.9	546.2
25°	556.4	557.7	558.4	560.4	561.8	563.8	564.5	564.1	561.8	557.7	556.7
27.5°	571.2	572.2	572.9	575.3	578.0	580.3	582.7	585.7	585.7	582.0	577.0
30°	599.9	598.6	599.2	599.9	602.3	605.6	608.7	612.7	614.8	613.4	606.7
32.5°	626.6	627.9	628.6	630.6	633.0	638.1	641.8	646.5	650.9	651.6	648.2
35°	665.7	665.1	664.1	671.1	673.8	679.6	684.0	690.7	694.1	697.1	695.1
37.5°	727.5	725.5	724.1	726.2	729.9	733.6	740.0	745.1	750.8	757.9	755.5
40°	815.0	819.0	813.3	816.0	819.0	810.6	816.3	821.0	830.8	831.2	830.8
42.5°	928.7	931.8	930.4	932.1	926.7	924.0	921.6	924.0	936.2	934.5	926.4
45°	1042.5	1046.9	1045.9	1046.5	1057.0	1052.6	1056.3	1057.0	1069.5	1066.1	1060.1
47.5°	1139.7	1147.2	1148.8	1154.9	1169.1	1180.6	1196.4	1208.3	1214.3	1218.4	1223.1
50°	1216.7	1222.1	1231.6	1246.7	1267.3	1287.3	1323.0	1346.3	1367.6	1382.5	1397.6
52.5°	1267.7	1273.8	1288.3	1311.2	1340.9	1377.4	1419.3	1467.9	1512.8	1539.1	1561.7
55°	1288.6	1294.7	1312.6	1342.6	1382.1	1428.7	1488.8	1557.3	1617.1	1677.5	1712.3
57.5°	1276.5	1283.2	1303.8	1337.6	1385.2	1446.3	1520.9	1604.9	1692.4	1783.9	1853.7
60°	1240.7	1246.7	1270.0	1305.1	1359.5	1428.4	1517.8	1623.2	1746.0	1881.8	2014.4
62.5°	1191.4	1200.5	1221.1	1256.9	1310.9	1386.2	1488.1	1625.2	1801.4	2020.2	2278.4
65°	1128.6	1135.3	1153.6	1181.9	1241.3	1320.0	1427.7	1595.5	1825.7	2136.0	2504.6
66°	1096.2	1102.6	1119.5	1146.1	1200.5	1276.1	1383.8	1555.6	1798.7	2135.3	2528.6
67.5°	1039.1	1042.2	1054.3	1080.6	1116.1	1184.0	1283.9	1444.9	1684.3	2045.2	2461.8
70°	871.7	876.1	887.9	901.4	914.5	938.9	1008.7	1115.1	1306.5	1652.5	2049.9
72.5°	602.9	609.7	622.5	647.5	668.1	698.8	726.2	761.6	825.1	1065.5	1466.5
75°	435.8	438.2	457.1	501.0	542.5	604.0	658.3	675.5	653.9	650.2	861.5
77.5°	259.9	263.3	290.7	334.9	378.1	461.5	572.9	659.0	706.6	689.7	652.2
80°	109.4	114.1	130.3	141.8	177.6	247.5	357.5	492.6	618.1	695.4	677.9
82.5°	35.1	40.8	48.3	58.4	68.9	92.2	142.8	213.7	337.6	503.4	618.8
85°	12.8	13.2	18.2	25.3	28.0	32.4	41.5	64.1	114.1	188.7	351.1
87.5°	5.1	6.1	7.1	9.8	10.1	10.5	11.8	15.2	14.9	12.8	66.5
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: P146588

CATALOG NUMBER: LDRL-T3-E02-E-8030

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5
2.5°	541.8	542.5	542.2	542.5	542.5	541.8	541.8	543.2	542.2	542.9	542.9
5°	541.5	542.2	541.8	542.5	542.5	542.2	542.2	544.2	543.9	544.9	545.6
7.5°	542.9	543.2	542.9	542.9	543.9	543.5	543.9	544.5	546.2	547.9	549.3
10°	544.5	545.2	546.2	546.6	547.9	547.6	548.6	549.6	551.3	553.0	554.7
12.5°	546.9	548.9	552.0	552.6	554.0	555.0	556.7	557.7	559.1	561.8	563.8
15°	548.9	552.6	556.4	557.7	559.1	560.4	562.1	563.1	565.5	567.8	570.2
17.5°	549.6	554.0	558.7	560.4	561.8	564.1	566.1	568.2	570.9	573.9	576.6
20°	549.9	556.0	562.1	564.1	567.2	570.5	573.9	575.6	579.3	583.0	585.4
22.5°	553.0	560.4	568.8	572.6	575.6	581.7	586.1	588.8	593.2	596.2	597.2
25°	561.4	569.2	579.3	585.1	590.1	598.9	604.3	609.4	611.7	615.8	614.8
27.5°	576.6	582.7	595.9	603.6	610.0	621.5	632.0	636.7	640.4	642.4	640.1
30°	602.6	605.0	619.5	628.9	639.7	657.6	669.1	675.2	679.9	680.3	674.2
32.5°	641.4	637.7	650.5	664.1	678.2	699.8	715.4	721.8	725.5	725.8	712.3
35°	694.1	687.7	698.5	711.7	729.2	757.6	777.1	784.6	790.3	787.6	767.7
37.5°	760.6	760.3	765.3	782.2	802.1	838.6	859.2	863.2	862.9	854.8	824.7
40°	834.5	828.5	829.1	841.3	864.2	912.2	940.9	947.6	945.3	933.5	894.3
42.5°	927.7	925.0	915.9	922.3	943.6	1002.0	1036.8	1043.5	1045.5	1026.0	979.7
45°	1058.4	1056.0	1035.7	1037.1	1052.6	1114.1	1150.2	1161.3	1161.7	1143.1	1083.0
47.5°	1216.7	1214.7	1191.0	1184.3	1192.1	1246.7	1291.6	1294.0	1294.7	1269.0	1206.6
50°	1396.3	1390.6	1372.7	1365.6	1356.5	1416.9	1453.0	1452.7	1449.0	1420.6	1350.4
52.5°	1569.8	1582.7	1575.9	1562.1	1562.4	1605.9	1640.0	1621.1	1623.5	1596.5	1515.8
55°	1755.2	1787.9	1812.6	1817.6	1815.3	1837.5	1856.4	1822.7	1810.2	1805.8	1720.1
57.5°	1952.0	2035.7	2111.7	2143.4	2131.2	2172.1	2189.0	2153.9	2154.5	2189.0	2115.0
60°	2215.0	2426.3	2617.7	2677.1	2704.8	2772.3	2742.3	2740.3	2793.3	2837.8	2700.8
62.5°	2614.0	2964.1	3269.6	3313.8	3336.1	3351.3	3337.8	3301.0	3355.7	3361.1	3149.8
65°	2916.5	3327.3	3622.7	3678.1	3674.1	3596.8	3521.8	3448.2	3447.5	3393.5	3121.4
66°	2949.2	3361.8	3649.8	3698.7	3680.8	3561.6	3466.4	3370.9	3340.2	3259.2	2983.0
67.5°	2877.7	3301.7	3587.6	3631.5	3593.4	3412.1	3282.4	3153.2	3106.9	2994.1	2712.6
70°	2460.1	2896.9	3279.4	3342.9	3297.6	3056.9	2864.8	2722.7	2596.8	2485.7	2253.5
72.5°	1907.4	2234.2	2639.0	2705.2	2708.9	2520.5	2304.1	2167.7	2021.2	1909.8	1735.6
75°	1251.1	1498.3	1720.7	1698.4	1704.9	1556.7	1427.7	1314.3	1181.6	1093.8	1010.8
77.5°	731.2	819.7	799.4	744.1	697.5	548.3	392.3	269.4	235.0	245.1	276.5
80°	635.7	586.1	458.8	403.4	367.0	249.1	134.0	94.5	83.0	84.1	89.1
82.5°	684.3	710.0	582.7	479.7	418.3	293.4	157.7	78.7	56.7	66.2	72.9
85°	531.0	675.9	623.2	526.7	442.9	311.9	161.0	50.0	33.8	45.2	57.1
87.5°	151.2	239.4	191.4	169.1	136.4	93.2	38.5	19.9	18.2	23.6	32.7
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: P146588

CATALOG NUMBER: LDRL-T3-E02-E-8030

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5
2.5°	543.2	543.2	544.2	544.5	544.9	544.9	545.6	545.6	545.9	547.2	546.9
5°	546.6	547.6	548.9	549.6	550.6	551.0	552.0	552.0	553.0	554.0	553.7
7.5°	550.6	551.6	552.6	553.7	554.7	556.0	555.7	555.3	555.0	554.3	553.7
10°	556.4	557.4	558.4	558.0	557.4	556.7	554.0	551.0	549.6	546.9	544.9
12.5°	565.8	566.8	565.8	563.1	559.4	555.0	549.3	544.2	541.2	537.1	534.8
15°	572.9	573.9	571.9	567.2	561.1	555.3	547.6	541.2	535.8	531.4	528.0
17.5°	578.3	577.6	573.2	567.8	561.4	556.7	549.6	542.5	536.1	530.0	525.3
20°	586.1	582.4	575.9	569.2	562.8	558.7	553.0	546.6	539.8	531.0	525.0
22.5°	596.2	589.4	581.0	574.3	568.2	564.1	558.4	552.3	545.9	535.8	527.3
25°	610.7	599.9	590.1	583.0	577.6	573.6	566.5	560.1	553.0	542.9	532.1
27.5°	631.0	615.4	605.3	598.2	592.8	588.1	579.0	571.2	562.1	552.0	539.1
30°	657.3	638.4	627.3	621.2	615.4	608.7	598.9	587.4	575.6	562.1	548.3
32.5°	690.0	668.8	658.3	652.2	644.8	635.7	622.9	607.7	590.1	572.2	555.0
35°	736.6	712.3	700.9	690.4	679.6	666.1	646.8	624.9	601.6	578.3	557.0
37.5°	782.9	760.3	746.1	735.3	718.4	696.5	669.8	639.4	608.3	578.6	553.0
40°	848.4	822.0	805.5	786.3	758.9	724.8	686.0	645.1	606.7	570.9	540.5
42.5°	928.7	898.7	874.0	839.3	796.7	747.4	693.8	641.8	594.8	553.7	520.2
45°	1030.3	991.2	950.0	895.3	830.1	761.3	693.4	630.0	574.6	528.0	494.9
47.5°	1148.8	1093.8	1024.6	941.2	852.1	764.7	682.6	608.7	544.2	492.9	454.7
50°	1270.7	1191.0	1092.8	976.7	863.2	756.2	658.7	573.9	504.4	446.0	404.8
52.5°	1420.9	1297.4	1154.6	1000.6	858.5	731.2	618.8	525.0	450.7	393.6	346.4
55°	1599.9	1419.6	1213.3	1013.8	837.6	686.3	558.4	460.8	382.8	330.8	288.3
57.5°	1895.9	1611.0	1313.6	1033.4	796.4	619.5	484.8	383.8	310.6	266.4	232.3
60°	2406.4	2003.6	1525.6	1081.7	739.3	524.3	391.3	300.8	240.4	204.9	181.0
62.5°	2762.6	2241.6	1639.7	1065.1	642.4	412.9	289.3	215.0	175.2	151.9	135.7
65°	2693.3	2147.8	1502.3	904.8	503.4	292.0	192.4	145.5	122.9	108.4	100.3
66°	2569.1	2044.1	1397.6	812.3	436.5	243.4	158.7	120.5	105.7	95.2	89.8
67.5°	2342.6	1829.4	1209.6	651.9	326.8	179.6	120.5	93.9	85.7	80.3	76.6
70°	1939.5	1446.6	832.9	385.2	172.8	100.6	76.6	69.2	65.5	63.1	62.8
72.5°	1487.1	1037.8	481.8	186.4	92.5	66.8	58.7	56.0	54.7	54.0	54.0
75°	918.6	585.4	215.4	93.5	63.8	54.7	51.0	49.6	49.3	49.3	49.3
77.5°	323.1	203.9	96.6	68.5	56.0	49.3	46.3	45.6	46.3	46.3	46.3
80°	89.1	78.7	69.9	60.8	50.6	45.6	42.9	42.5	43.9	44.2	42.9
82.5°	69.5	65.5	59.8	54.4	46.3	41.5	40.2	40.8	41.5	40.5	38.5
85°	59.4	56.7	41.9	41.9	37.5	36.1	35.8	36.5	36.1	33.4	30.7
87.5°	33.8	29.7	22.6	24.6	26.3	27.0	22.6	24.3	24.0	21.3	19.9
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: P146588

CATALOG NUMBER: LDRL-T3-E02-E-8030

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	542.5	542.5	542.5	542.5	542.5
2.5°	547.6	547.6	548.3	548.3	547.9
5°	554.3	554.3	555.3	554.7	555.0
7.5°	553.0	551.6	551.6	551.0	550.6
10°	543.5	541.2	539.8	540.5	539.5
12.5°	532.7	530.7	529.4	529.0	528.7
15°	526.0	523.6	522.6	521.9	521.9
17.5°	522.3	519.6	518.2	517.2	516.9
20°	520.6	517.2	515.2	514.2	513.5
22.5°	521.2	517.2	514.5	513.1	512.5
25°	523.9	518.9	515.5	513.8	512.8
27.5°	528.7	521.9	518.2	515.8	514.5
30°	534.4	525.0	519.6	516.2	514.8
32.5°	538.1	525.3	518.5	513.5	512.1
35°	537.5	521.6	512.8	506.4	505.4
37.5°	530.7	511.8	501.0	492.6	491.5
40°	516.2	496.9	484.5	476.0	474.0
42.5°	495.9	476.0	462.5	454.7	452.0
45°	466.2	441.9	429.4	423.0	419.3
47.5°	424.4	401.4	387.6	382.2	377.4
50°	376.8	351.4	341.3	335.2	329.8
52.5°	320.7	299.1	291.3	285.6	281.2
55°	266.4	251.2	242.1	236.0	236.3
57.5°	214.0	204.9	199.9	193.4	194.1
60°	168.5	160.7	160.7	156.6	155.3
62.5°	128.6	125.6	124.6	123.2	120.9
65°	97.6	97.6	97.9	97.9	96.6
66°	87.8	88.8	90.1	90.1	88.5
67.5°	76.0	77.3	78.7	79.3	79.3
70°	62.8	64.5	65.2	65.8	65.5
72.5°	55.0	56.4	56.4	56.7	56.0
75°	50.0	50.6	51.0	50.3	50.0
77.5°	46.3	46.6	46.3	45.9	45.6
80°	41.9	41.5	40.5	39.2	38.8
82.5°	36.1	34.8	34.1	32.1	31.7
85°	29.0	27.3	26.0	23.3	21.9
87.5°	19.2	18.6	17.6	12.8	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)