

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: P146889

Luminaire Tested: **LDRL-T4-E06-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146889
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-E06-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (126) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16103.9 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G3

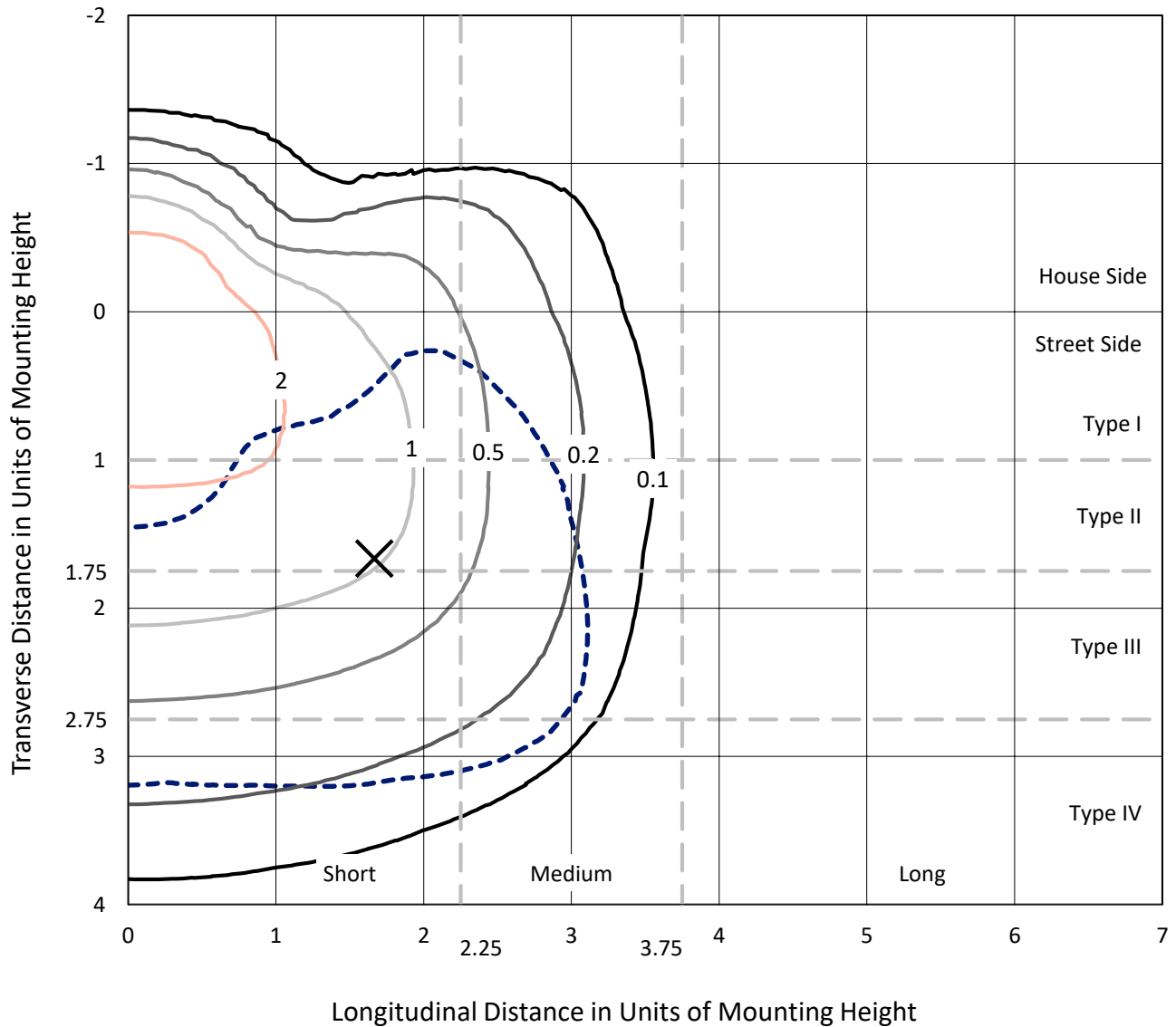
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P146889
 CATALOG NUMBER: LDRL-T4-E06-E-7030

Iso-Footcandle Lines of Horizontal Illumination

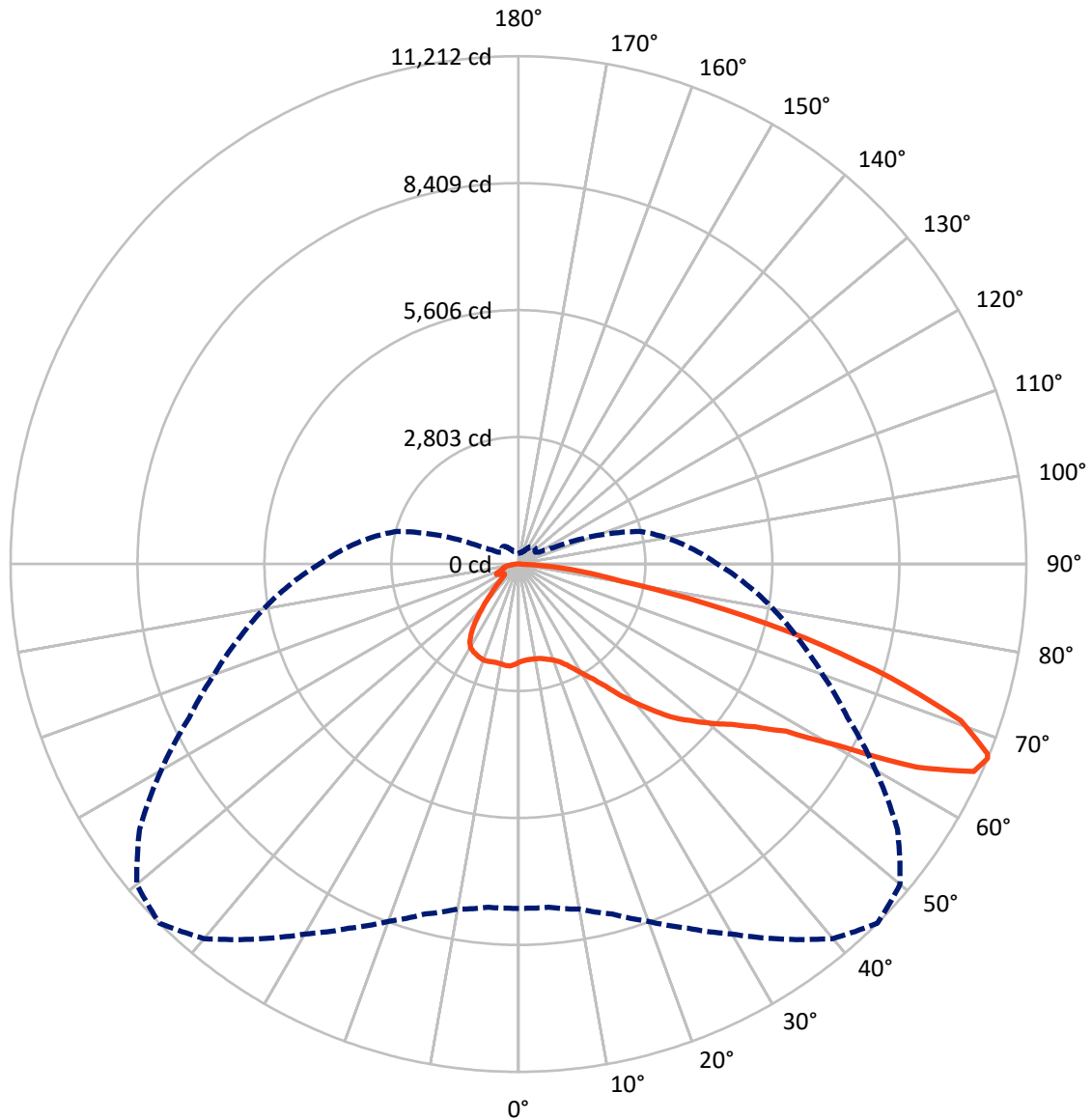
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P146889
CATALOG NUMBER: LDRL-T4-E06-E-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P146889

CATALOG NUMBER: LDRL-T4-E06-E-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3263.0	0.0	3263.0
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	12840.8	0.0	12840.8
	% Fixture	79.7	0.0	79.7
Total	Lumens	16103.9	0.0	16103.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.0	1.3
10°-20°	627.4	3.9
20°-30°	1066.4	6.6
30°-40°	1602.6	10.0
40°-50°	2083.9	12.9
50°-60°	2861.1	17.8
60°-70°	4513.4	28.0
70°-80°	2727.1	16.9
80°-90°	413.1	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°	16103.9	100.0
0°-180°	16103.9	100.0



REPORT NUMBER: P146889

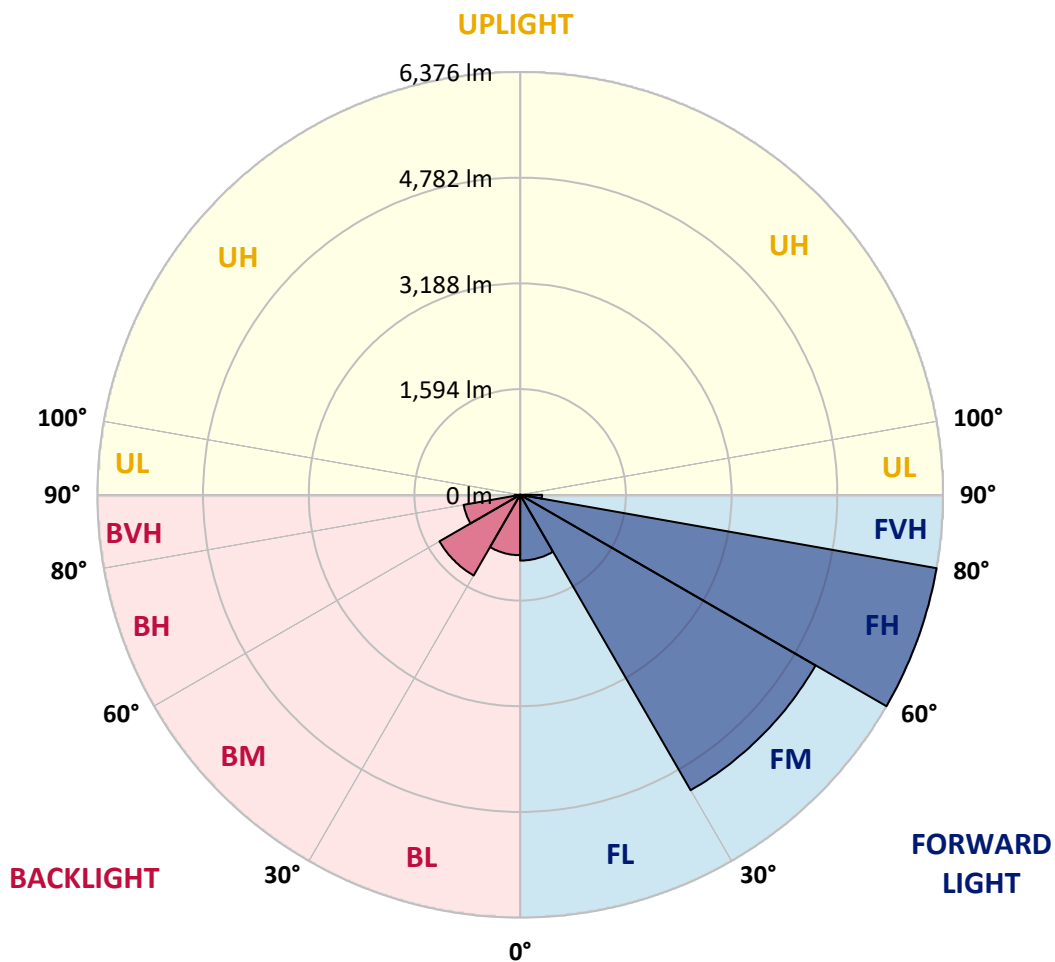
CATALOG NUMBER: LDRL-T4-E06-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	991.7	6.2			
FM	(30°-60°)	5143.4	31.9			
FH	(60°-80°)	6375.8	39.6			G3/7500
FVH	(80°-90°)	329.9	2.0			G3/500
BL	(0°-30°)	911.0	5.7	B2/1000		
BM	(30°-60°)	1404.1	8.7	B2/2500		
BH	(60°-80°)	864.6	5.4	B2/1000		G2/1000
BVH	(80°-90°)	83.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P146889

CATALOG NUMBER: LDRL-T4-E06-E-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9
2.5°	2119.7	2124.1	2120.8	2120.8	2121.9	2123.0	2125.2	2129.6	2130.7	2137.2	2138.3
5°	2077.0	2078.1	2078.1	2079.2	2085.7	2091.2	2096.7	2104.4	2110.9	2123.0	2130.7
7.5°	2061.6	2066.0	2064.9	2067.1	2073.7	2079.2	2085.7	2096.7	2113.1	2123.0	2134.0
10°	2086.8	2090.1	2086.8	2087.9	2089.0	2094.5	2096.7	2104.4	2117.5	2126.3	2136.1
12.5°	2144.9	2144.9	2141.6	2139.4	2136.1	2137.2	2132.9	2131.8	2138.3	2139.4	2140.5
15°	2221.6	2230.4	2219.4	2210.7	2206.3	2201.9	2187.7	2182.2	2181.1	2171.2	2161.4
17.5°	2299.5	2301.6	2295.1	2285.2	2278.6	2268.8	2256.7	2245.7	2232.6	2217.2	2197.5
20°	2386.0	2387.1	2378.4	2364.1	2356.4	2344.4	2329.0	2310.4	2294.0	2269.9	2247.9
22.5°	2506.6	2505.5	2488.0	2475.9	2464.9	2450.7	2428.8	2403.6	2377.3	2348.8	2318.1
25°	2644.7	2644.7	2632.6	2612.9	2607.4	2586.6	2562.5	2532.9	2505.5	2464.9	2427.7
27.5°	2802.5	2803.6	2781.7	2770.7	2758.7	2736.8	2720.3	2697.3	2660.0	2619.5	2581.1
30°	2989.9	2984.5	2966.9	2943.9	2939.5	2922.0	2899.0	2882.5	2836.5	2808.0	2765.3
32.5°	3167.5	3176.3	3171.9	3145.6	3150.0	3132.4	3112.7	3100.6	3052.4	3025.0	2985.6
35°	3432.7	3440.4	3447.0	3437.1	3442.6	3432.7	3416.3	3384.5	3345.1	3308.9	3254.1
37.5°	3638.8	3646.5	3650.8	3675.0	3710.0	3744.0	3759.4	3742.9	3745.1	3690.3	3616.9
40°	3807.6	3826.2	3852.5	3898.5	3968.7	4033.4	4068.4	4095.8	4110.1	4058.6	3963.2
42.5°	3976.4	3996.1	4032.3	4105.7	4202.1	4295.3	4368.7	4453.1	4468.5	4455.3	4374.2
45°	4152.8	4175.8	4220.8	4304.1	4417.0	4538.6	4657.0	4776.5	4836.7	4846.6	4748.0
47.5°	4365.4	4398.3	4440.0	4534.2	4643.8	4780.8	4928.8	5082.2	5176.5	5176.5	5062.5
50°	4630.7	4668.0	4703.0	4797.3	4906.9	5048.3	5219.2	5390.2	5518.5	5526.1	5388.0
52.5°	5002.2	5007.7	5028.5	5115.1	5210.5	5368.3	5530.5	5728.9	5876.9	5883.4	5724.5
55°	5453.8	5453.8	5477.9	5550.2	5639.0	5769.5	5937.1	6157.4	6313.1	6347.1	6143.2
57.5°	6047.8	6069.8	6081.8	6166.2	6226.5	6364.6	6504.9	6744.9	6943.3	6965.2	6758.1
60°	7014.5	6972.9	7039.7	7114.3	7255.7	7356.5	7595.4	7836.5	8089.7	8150.0	7927.5
62.5°	7967.0	8011.9	8094.1	8228.9	8471.1	8696.9	9038.9	9405.0	9798.4	9879.5	9709.6
65°	8026.2	8053.6	8167.5	8399.9	8730.9	9133.1	9604.4	10155.7	10742.1	11045.7	10760.7
67°	7600.9	7608.6	7737.9	8002.0	8398.8	8875.6	9433.4	10106.4	10794.7	11212.3	10999.7
67.5°	7466.1	7480.3	7607.5	7877.1	8278.2	8766.0	9334.8	10026.4	10731.1	11167.4	10975.5
70°	6674.8	6674.8	6811.8	7083.6	7459.5	7935.2	8530.3	9228.5	9994.6	10361.8	10198.5
72.5°	5681.8	5645.6	5800.1	6006.2	6313.1	6728.5	7207.4	7758.7	8335.2	8602.7	8538.0
75°	4129.8	4197.8	4277.8	4430.1	4696.4	5024.2	5304.7	5796.9	6249.5	6545.4	6467.6
77.5°	2253.4	2279.7	2501.1	2592.1	2825.5	3068.9	3376.8	3722.1	4078.3	4264.6	4189.0
80°	1339.3	1390.8	1522.4	1630.9	1756.9	1942.1	2165.7	2241.4	2311.5	2307.1	2170.1
82.5°	846.1	908.6	1051.1	1144.2	1210.0	1317.4	1439.1	1534.4	1555.3	1452.2	1293.3
85°	137.0	226.9	592.9	697.1	738.7	796.8	886.7	927.2	865.9	756.3	783.7
87.5°	53.7	64.7	180.8	229.1	242.2	127.1	220.3	258.7	131.5	66.9	151.3
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: P146889

CATALOG NUMBER: LDRL-T4-E06-E-7030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9
2.5°	2144.9	2150.4	2155.9	2162.4	2164.6	2170.1	2180.0	2178.9	2186.6	2189.8	2195.3
5°	2140.5	2152.6	2161.4	2173.4	2177.8	2189.8	2203.0	2207.4	2217.2	2224.9	2231.5
7.5°	2149.3	2162.4	2173.4	2187.7	2197.5	2207.4	2217.2	2229.3	2238.1	2243.6	2247.9
10°	2152.6	2166.8	2180.0	2192.0	2203.0	2210.7	2221.6	2231.5	2240.3	2243.6	2244.6
12.5°	2153.7	2163.5	2176.7	2189.8	2199.7	2209.6	2217.2	2228.2	2234.8	2235.9	2233.7
15°	2162.4	2163.5	2172.3	2187.7	2197.5	2207.4	2212.9	2218.3	2222.7	2219.4	2216.2
17.5°	2188.8	2181.1	2181.1	2188.8	2194.2	2198.6	2199.7	2198.6	2194.2	2187.7	2182.2
20°	2231.5	2216.2	2204.1	2199.7	2190.9	2180.0	2165.7	2152.6	2136.1	2128.5	2127.4
22.5°	2298.4	2275.3	2253.4	2231.5	2203.0	2171.2	2138.3	2109.8	2086.8	2074.8	2075.9
25°	2412.3	2378.4	2353.2	2314.8	2268.8	2223.8	2181.1	2142.7	2115.3	2093.4	2097.8
27.5°	2565.8	2527.4	2505.5	2461.7	2409.1	2352.1	2301.6	2249.0	2209.6	2182.2	2187.7
30°	2745.5	2734.6	2698.4	2654.6	2605.2	2540.6	2464.9	2386.0	2314.8	2269.9	2261.1
32.5°	2962.5	2950.5	2911.0	2873.8	2810.2	2739.0	2640.3	2515.4	2403.6	2318.1	2280.8
35°	3230.0	3200.4	3152.2	3116.0	3044.7	2952.7	2825.5	2656.8	2486.9	2358.6	2265.5
37.5°	3563.2	3489.7	3409.7	3315.5	3210.2	3098.4	2951.6	2754.3	2543.9	2361.9	2196.4
40°	3881.0	3762.6	3630.0	3481.0	3352.7	3217.9	3065.6	2839.8	2582.2	2338.9	2092.3
42.5°	4235.0	4050.9	3871.1	3666.2	3497.4	3337.4	3163.1	2900.1	2589.9	2276.4	1957.5
45°	4575.9	4339.1	4098.0	3844.8	3630.0	3452.5	3254.1	2951.6	2587.7	2210.7	1823.8
47.5°	4879.5	4596.7	4298.6	4013.6	3763.7	3568.6	3351.6	3021.7	2617.3	2192.0	1735.0
50°	5163.4	4836.7	4487.1	4170.4	3898.5	3699.1	3475.5	3132.4	2708.3	2234.8	1721.8
52.5°	5456.0	5100.9	4700.8	4360.0	4076.1	3844.8	3619.1	3273.8	2835.4	2322.5	1751.4
55°	5837.4	5429.7	5003.3	4625.2	4299.7	4050.9	3790.0	3444.8	2972.4	2424.4	1807.3
57.5°	6405.1	5928.4	5443.9	5037.3	4661.4	4351.2	4065.1	3669.5	3199.3	2577.8	1930.1
60°	7424.4	6896.2	6335.0	5803.4	5370.5	5007.7	4643.8	4152.8	3618.0	2926.4	2211.8
62.5°	9089.3	8358.3	7582.3	6883.0	6287.9	5796.9	5283.9	4694.3	4070.6	3349.4	2638.1
65°	10090.0	9081.6	8094.1	7283.1	6579.4	5950.3	5329.9	4696.4	4092.5	3462.3	2829.9
67°	10213.8	9107.9	8015.2	7151.5	6397.5	5712.5	5039.5	4391.8	3851.4	3323.1	2777.3
67.5°	10176.5	9055.3	7940.7	7068.2	6306.5	5643.4	4981.4	4318.3	3792.2	3263.9	2737.9
70°	9442.2	8345.1	7242.5	6394.2	5664.2	4985.8	4360.0	3695.8	3289.2	2911.0	2456.2
72.5°	7836.5	6980.6	6056.6	5349.7	4719.5	4132.0	3581.8	3026.1	2699.5	2432.1	2112.0
75°	5811.1	5026.3	4244.9	3819.6	3330.8	2860.6	2435.4	2024.3	1898.3	1834.7	1646.2
77.5°	3588.4	2883.6	2295.1	1910.4	1519.1	1190.3	947.0	770.5	803.4	934.9	995.2
80°	1786.5	1319.6	1021.5	812.2	656.5	530.5	389.1	285.0	340.9	404.4	458.1
82.5°	1075.2	849.4	671.9	568.8	462.5	357.3	253.2	192.9	213.7	287.2	315.7
85°	667.5	534.9	427.4	357.3	295.9	219.2	143.6	142.5	151.3	190.7	218.1
87.5°	196.2	132.6	105.2	109.6	121.7	100.8	75.6	64.7	80.0	109.6	122.8
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: P146889

CATALOG NUMBER: LDRL-T4-E06-E-7030

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9	2167.9
2.5°	2196.4	2204.1	2207.4	2208.5	2209.6	2216.2	2216.2	2222.7	2224.9	2224.9	2227.1
5°	2238.1	2245.7	2249.0	2250.1	2252.3	2255.6	2254.5	2258.9	2261.1	2260.0	2260.0
7.5°	2253.4	2255.6	2255.6	2258.9	2262.2	2258.9	2256.7	2258.9	2257.8	2258.9	2258.9
10°	2247.9	2245.7	2245.7	2243.6	2246.8	2240.3	2240.3	2242.5	2241.4	2243.6	2246.8
12.5°	2234.8	2233.7	2230.4	2229.3	2233.7	2229.3	2230.4	2233.7	2235.9	2240.3	2245.7
15°	2216.2	2212.9	2212.9	2217.2	2228.2	2231.5	2235.9	2241.4	2242.5	2244.6	2246.8
17.5°	2184.4	2189.8	2203.0	2218.3	2239.2	2246.8	2249.0	2245.7	2234.8	2226.0	2217.2
20°	2140.5	2164.6	2198.6	2231.5	2256.7	2255.6	2241.4	2220.5	2194.2	2175.6	2163.5
22.5°	2103.3	2150.4	2203.0	2242.5	2258.9	2238.1	2205.2	2173.4	2142.7	2115.3	2091.2
25°	2129.6	2174.5	2219.4	2243.6	2242.5	2206.3	2162.4	2127.4	2085.7	2047.4	2006.8
27.5°	2215.1	2242.5	2255.6	2247.9	2224.9	2176.7	2128.5	2079.2	2025.4	1979.4	1932.3
30°	2273.1	2273.1	2260.0	2229.3	2188.8	2135.0	2075.9	2012.3	1948.7	1895.0	1841.3
32.5°	2254.5	2211.8	2173.4	2131.8	2085.7	2027.6	1959.7	1890.6	1818.3	1755.8	1709.8
35°	2173.4	2081.3	2001.3	1942.1	1893.9	1824.9	1746.0	1667.0	1607.9	1565.1	1538.8
37.5°	2028.7	1881.9	1765.7	1693.4	1618.8	1547.6	1456.6	1420.4	1367.8	1341.5	1331.7
40°	1853.4	1638.6	1492.8	1399.6	1320.7	1231.9	1170.5	1147.5	1127.8	1122.3	1117.9
42.5°	1651.7	1383.2	1210.0	1113.6	1018.2	953.5	926.1	911.9	908.6	908.6	914.1
45°	1442.4	1123.4	923.9	846.1	767.2	733.2	726.7	720.1	721.2	717.9	720.1
47.5°	1280.2	902.0	697.1	625.8	585.3	574.3	566.6	564.5	564.5	559.0	552.4
50°	1195.8	754.1	546.9	491.0	468.0	460.3	460.3	455.9	447.2	441.7	427.4
52.5°	1173.8	677.3	473.5	425.3	405.5	399.0	392.4	385.8	372.6	360.6	344.2
55°	1191.4	653.2	450.5	405.5	383.6	375.9	370.5	359.5	340.9	323.3	304.7
57.5°	1264.8	668.6	459.2	411.0	391.3	385.8	380.3	363.9	340.9	315.7	294.8
60°	1465.4	740.9	496.5	440.6	424.2	425.3	417.6	396.8	363.9	327.7	297.0
62.5°	1724.0	841.7	544.7	482.2	480.1	491.0	491.0	454.8	401.1	346.3	304.7
65°	1872.0	873.5	551.3	487.7	506.4	538.1	536.0	487.7	414.3	346.3	301.4
67°	1834.7	839.6	523.9	455.9	477.9	514.0	509.6	463.6	394.6	332.1	292.6
67.5°	1805.1	828.6	517.3	448.3	470.2	499.8	499.8	453.8	385.8	327.7	289.3
70°	1589.2	732.1	484.4	418.7	418.7	426.4	420.9	388.0	342.0	301.4	276.2
72.5°	1325.1	640.1	458.1	397.9	377.0	372.6	365.0	342.0	312.4	283.9	261.9
75°	1027.0	566.6	437.3	375.9	348.5	338.7	331.0	313.5	290.4	266.3	247.7
77.5°	719.0	485.5	409.9	357.3	327.7	320.0	308.0	288.3	269.6	248.8	231.3
80°	446.1	401.1	357.3	322.2	291.5	280.6	265.2	247.7	232.4	220.3	207.1
82.5°	317.8	294.8	266.3	247.7	215.9	183.0	196.2	197.3	187.4	179.7	176.5
85°	212.6	191.8	177.6	161.1	142.5	128.2	131.5	141.4	142.5	139.2	139.2
87.5°	116.2	98.6	95.4	98.6	85.5	81.1	82.2	91.0	92.1	92.1	93.2
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: P146889

CATALOG NUMBER: LDRL-T4-E06-E-7030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2167.9	2167.9	2167.9	2167.9
2.5°	2228.2	2231.5	2230.4	2232.6
5°	2262.2	2264.4	2263.3	2264.4
7.5°	2256.7	2261.1	2263.3	2260.0
10°	2247.9	2254.5	2258.9	2258.9
12.5°	2250.1	2261.1	2267.7	2267.7
15°	2247.9	2256.7	2258.9	2258.9
17.5°	2214.0	2214.0	2215.1	2210.7
20°	2154.8	2148.2	2146.0	2138.3
22.5°	2070.4	2055.0	2045.2	2039.7
25°	1973.9	1949.8	1934.5	1925.7
27.5°	1893.9	1873.1	1857.8	1849.0
30°	1805.1	1781.0	1772.3	1765.7
32.5°	1676.9	1653.9	1647.3	1641.8
35°	1510.3	1502.6	1485.1	1473.1
37.5°	1317.4	1307.6	1301.0	1296.6
40°	1115.7	1116.8	1111.4	1101.5
42.5°	914.1	925.0	914.1	911.9
45°	717.9	729.9	729.9	733.2
47.5°	553.5	551.3	555.7	556.8
50°	418.7	412.1	409.9	406.6
52.5°	332.1	324.4	320.0	314.6
55°	292.6	283.9	279.5	278.4
57.5°	279.5	268.5	261.9	260.9
60°	276.2	260.9	252.1	249.9
62.5°	276.2	257.6	247.7	244.4
65°	272.9	254.3	245.5	242.2
67°	268.5	252.1	243.3	241.1
67.5°	266.3	251.0	243.3	240.0
70°	260.9	247.7	238.9	235.6
72.5°	248.8	237.8	229.1	226.9
75°	235.6	225.8	220.3	218.1
77.5°	220.3	211.5	205.0	199.5
80°	197.3	187.4	177.6	175.4
82.5°	167.7	156.7	149.1	148.0
85°	134.8	126.0	117.3	117.3
87.5°	94.3	88.8	83.3	77.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)