

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: P163562

Luminaire Tested: **LDRL-SL3-F06-E-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P163562  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-SL3-F06-E-HSS  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (42) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

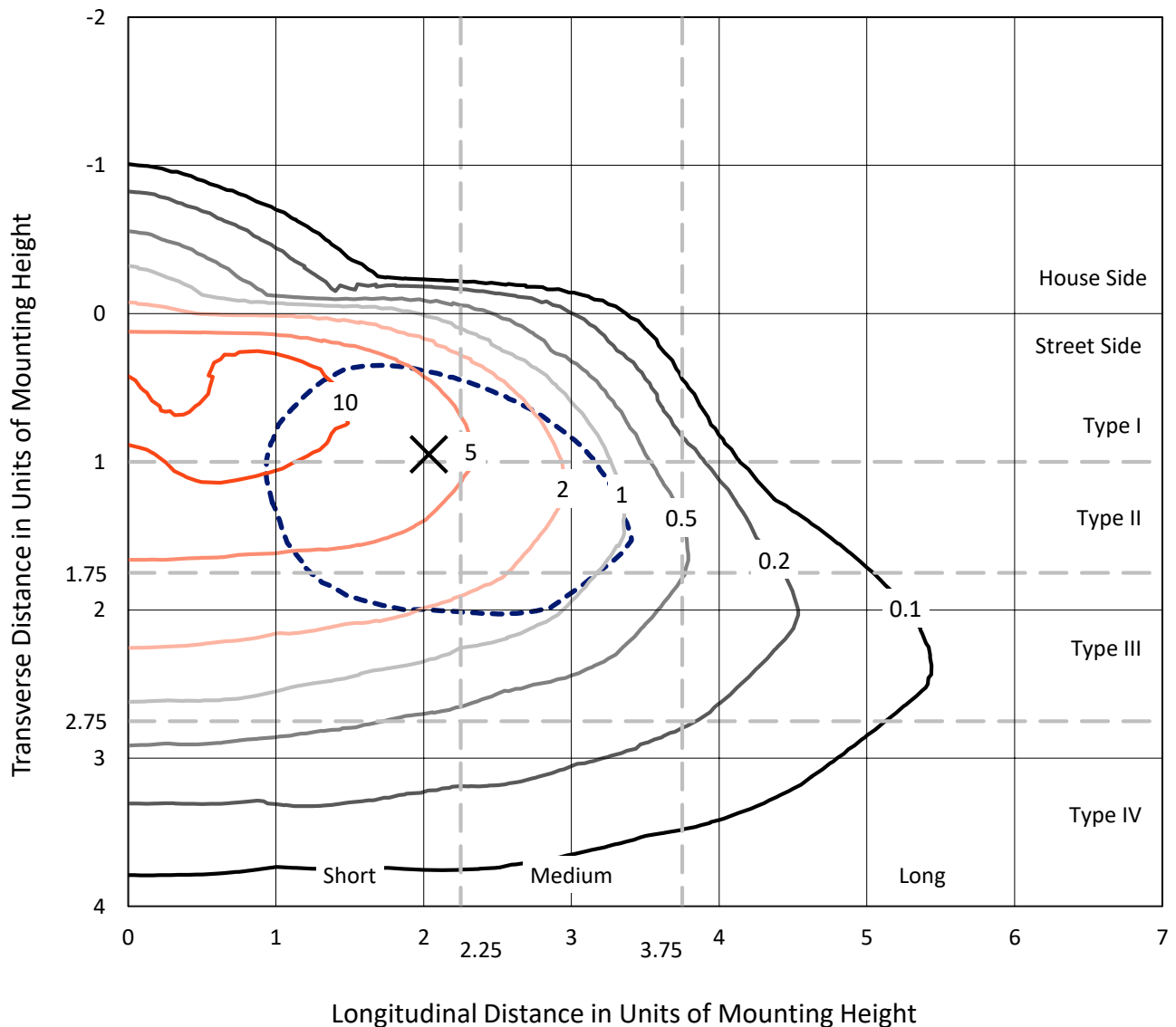
Lumens per Lamp: N/A  
Luminaire Lumens: 8330.1 lumens  
Efficiency: N/A  
Efficacy: 53.2 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 156.5  
Input Voltage (V): NR  
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: P163562  
 CATALOG NUMBER: LDRL-SL3-F06-E-HSS

### Iso-Footcandle Lines of Horizontal Illumination

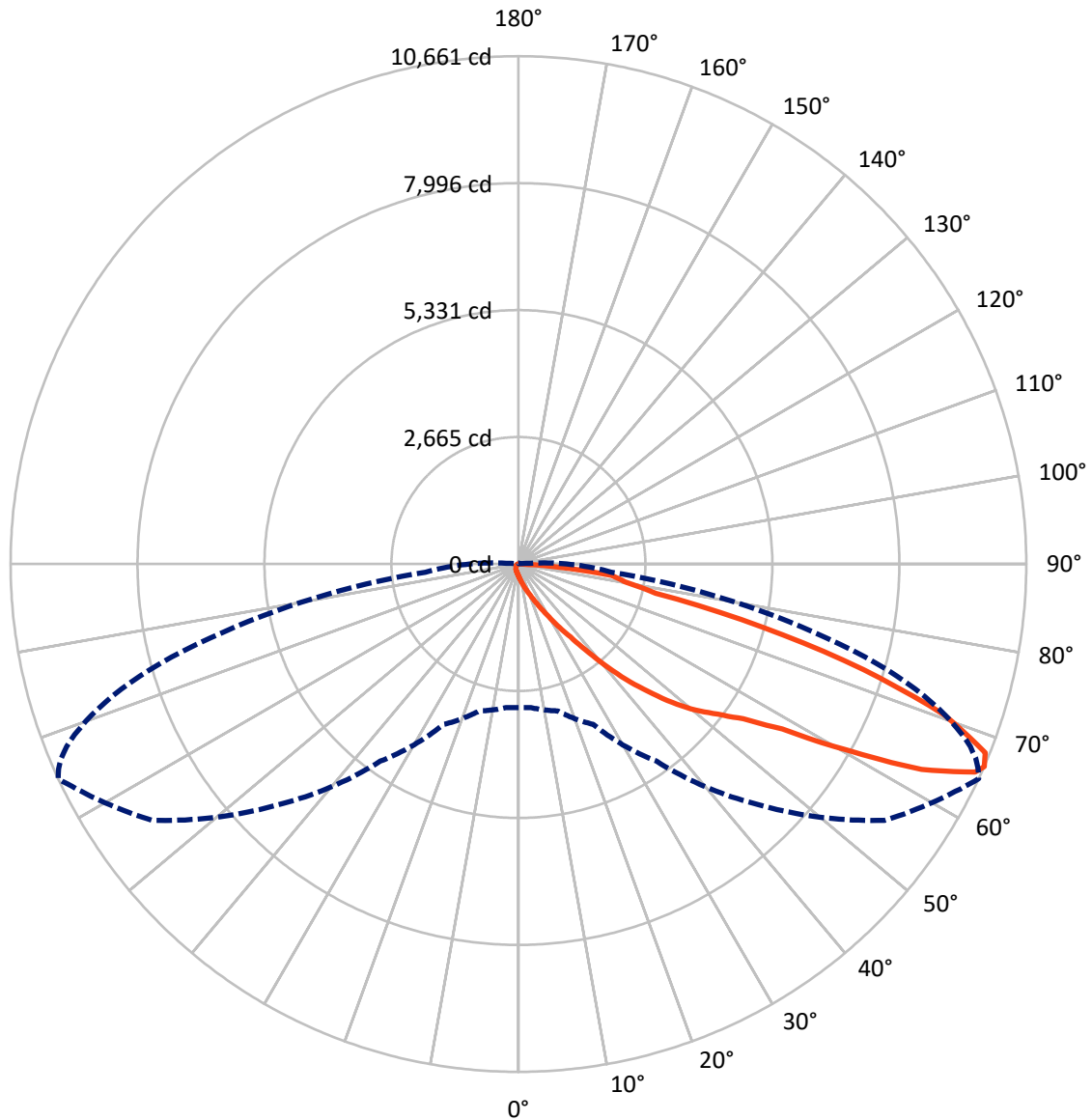
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.7 fc  
 Type III - Short - Non-Cutoff

REPORT NUMBER: P163562  
CATALOG NUMBER: LDRL-SL3-F06-E-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

REPORT NUMBER: P163562

CATALOG NUMBER: LDRL-SL3-F06-E-HSS

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	180.5	0.0	180.5
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	8149.6	0.0	8149.6
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	8330.1	0.0	8330.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.1	0.3
10°-20°	119.3	1.4
20°-30°	257.4	3.1
30°-40°	549.7	6.6
40°-50°	1215.7	14.6
50°-60°	2060.2	24.7
60°-70°	2749.2	33.0
70°-80°	1211.0	14.5
80°-90°	139.5	1.7
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°	8330.1	100.0
0°-180°	8330.1	100.0



REPORT NUMBER: P163562

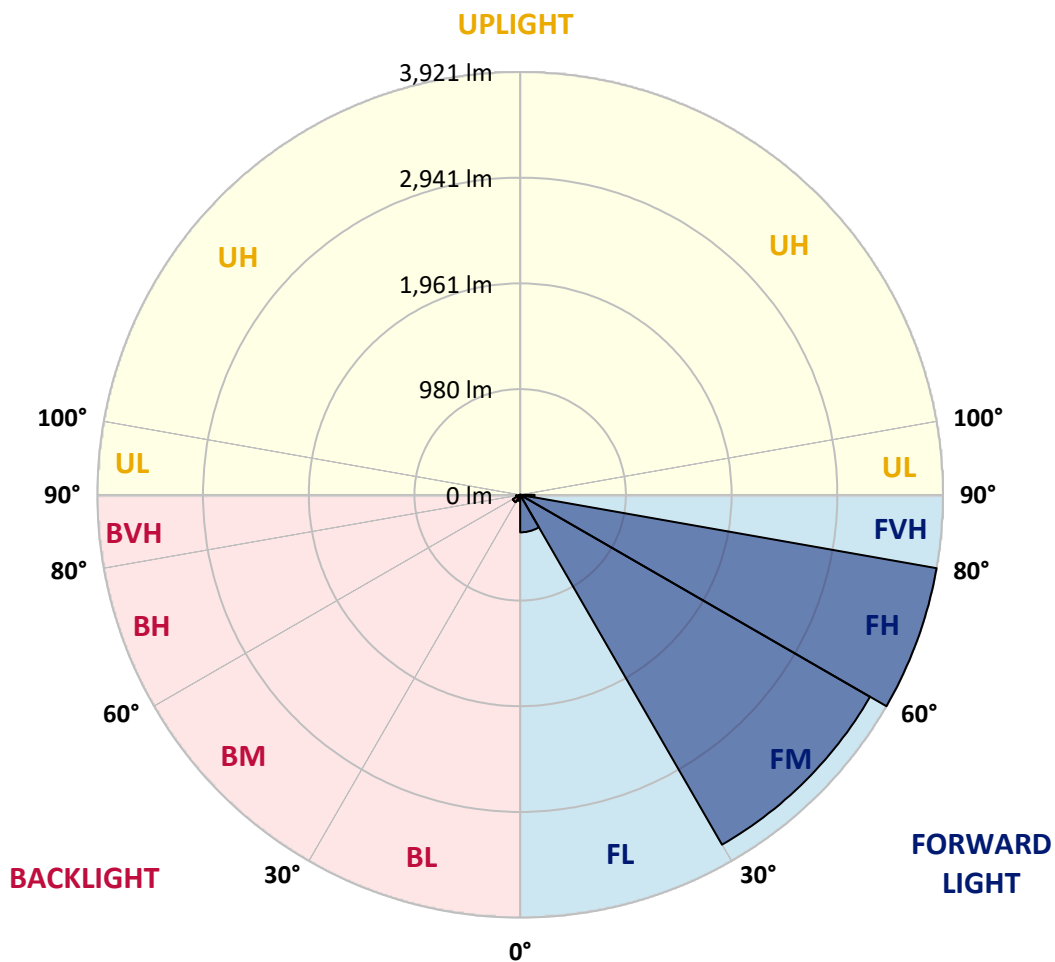
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	347.9	4.2			
FM	(30°-60°)	3746.3	45.0			
FH	(60°-80°)	3921.4	47.1			G2/5000
FVH	(80°-90°)	133.9	1.6			G2/225
BL	(0°-30°)	57.0	0.7	B0/110		
BM	(30°-60°)	79.3	1.0	B0/220		
BH	(60°-80°)	38.7	0.5	B0/110		G0/110
BVH	(80°-90°)	5.6	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type III Short





REPORT NUMBER: P163562  
 CATALOG NUMBER: LDRL-SL3-F06-E-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4
2.5°	317.1	315.5	309.1	309.1	299.5	293.0	285.1	277.1	277.1	275.5	273.8
5°	419.6	410.0	408.3	390.8	376.3	355.5	336.3	310.7	307.5	304.3	302.6
7.5°	533.3	531.7	517.3	496.5	467.7	429.2	390.8	349.1	342.8	339.5	333.1
10°	680.7	672.6	653.4	618.2	575.0	523.6	461.2	395.6	387.5	381.2	377.9
12.5°	821.5	807.2	796.0	751.1	696.6	621.4	546.1	451.6	445.2	437.2	424.4
15°	952.9	940.1	920.9	882.5	821.5	727.1	639.0	523.6	507.7	496.5	486.9
17.5°	1055.4	1047.4	1025.0	981.7	916.0	832.8	727.1	597.3	584.6	570.1	552.5
20°	1153.1	1141.9	1106.6	1047.4	977.0	912.9	831.1	693.4	675.8	658.2	639.0
22.5°	1246.0	1234.7	1177.1	1079.4	1004.1	977.0	948.1	802.3	775.2	760.7	741.5
25°	1375.7	1351.7	1262.0	1106.6	1005.8	1026.6	1076.2	943.3	917.6	896.8	866.4
27.5°	1550.2	1518.2	1377.3	1146.7	1012.1	1081.0	1223.5	1114.7	1087.4	1063.4	1029.8
30°	1747.3	1726.4	1558.3	1242.7	1058.6	1161.1	1388.5	1332.5	1300.4	1271.6	1231.6
32.5°	1945.8	1917.0	1750.4	1425.3	1183.5	1316.4	1595.1	1585.5	1543.9	1516.7	1473.4
35°	2120.3	2106.0	1982.6	1724.8	1468.6	1588.7	1870.5	1881.8	1844.9	1816.1	1768.1
37.5°	2238.9	2238.9	2214.9	2046.7	1921.8	2011.5	2275.8	2277.4	2240.5	2174.8	2150.9
40°	2299.7	2317.4	2403.9	2435.9	2429.5	2544.8	2807.4	2778.6	2748.2	2714.5	2634.5
42.5°	2424.7	2440.7	2624.9	2845.9	2990.0	3142.2	3323.1	3313.5	3276.7	3215.8	3142.2
45°	2636.1	2656.9	2876.3	3227.0	3523.3	3739.5	3854.8	3810.0	3773.1	3715.5	3677.0
47.5°	2905.1	2945.1	3193.4	3627.4	3984.5	4341.6	4461.8	4343.3	4311.2	4266.4	4203.9
50°	3191.8	3230.2	3494.4	3991.0	4394.5	4820.5	5020.7	4820.5	4774.0	4759.7	4689.2
52.5°	3440.1	3472.1	3726.7	4271.2	4708.5	5208.0	5499.6	5235.3	5201.7	5153.7	5102.3
55°	3587.4	3613.0	3851.6	4405.7	4921.4	5557.2	5962.4	5730.2	5680.6	5661.4	5587.6
57.5°	3637.0	3662.7	3877.2	4423.4	5036.8	5875.9	6524.5	6532.5	6473.3	6404.4	6382.0
60°	3637.0	3665.8	3846.8	4380.1	5148.8	6215.4	7274.0	7941.9	7813.7	7800.9	7719.3
62.5°	3486.4	3513.7	3696.2	4247.2	5299.4	6673.5	8318.2	9496.9	9460.1	9376.8	9242.3
65°	3159.8	3175.8	3355.2	3907.6	5241.7	7094.7	9223.1	10531.5	10472.2	10308.9	10135.9
66°	3012.4	3025.3	3193.4	3713.9	5052.7	7152.3	9383.2	10661.2	10563.5	10425.8	10230.4
67.5°	2799.4	2821.8	2940.4	3353.6	4599.5	6952.1	9282.3	10569.9	10485.0	10318.5	10123.0
70°	1868.9	1853.0	2270.9	2573.7	3504.1	5664.5	8327.8	9490.5	9492.1	9413.7	9335.2
72.5°	887.2	896.8	1018.6	1583.9	2293.3	3784.3	6628.6	7575.1	7684.0	7543.1	7445.4
75°	637.4	651.8	725.4	968.9	1367.7	2270.9	4296.9	5297.8	5301.0	5051.1	4828.5
77.5°	185.7	193.8	272.2	597.3	1025.0	1532.6	2468.0	2945.1	2876.3	2696.9	2528.8
80°	76.9	76.9	80.0	190.6	411.6	1041.0	1726.4	2267.7	2259.7	2190.9	2091.5
82.5°	28.8	30.4	38.4	78.5	97.7	256.3	1151.5	1968.3	1963.4	1865.8	1795.3
85°	3.2	3.2	9.6	33.6	36.9	48.0	230.6	868.0	863.2	868.0	760.7
87.5°	0.0	0.0	1.6	3.2	4.8	6.4	9.6	33.6	36.9	35.3	32.0
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: P163562

CATALOG NUMBER: LDRL-SL3-F06-E-HSS

**CANDELA DISTRIBUTION (continued):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4
2.5°	273.8	270.6	270.6	269.1	269.1	269.1	267.5	265.9	265.9	264.2	262.6
5°	299.5	296.3	294.7	291.4	289.9	288.3	285.1	283.4	280.2	278.7	277.1
7.5°	329.9	323.5	321.9	317.1	312.2	309.1	305.9	301.1	297.9	291.4	289.9
10°	368.3	360.3	354.0	347.5	342.8	334.7	329.9	323.5	317.1	312.2	307.5
12.5°	417.9	406.8	397.1	390.8	379.5	369.9	360.3	355.5	342.8	336.3	328.3
15°	472.4	459.7	448.5	435.6	427.6	411.6	398.7	384.4	377.9	366.7	354.0
17.5°	542.9	522.1	504.4	491.6	475.6	459.7	445.2	430.8	411.6	398.7	382.8
20°	618.2	600.5	576.5	554.2	534.9	515.7	494.8	475.6	458.1	437.2	417.9
22.5°	714.2	688.7	659.9	637.4	611.8	590.9	562.1	536.5	507.7	480.5	458.1
25°	836.0	802.3	775.2	743.1	712.7	680.7	645.4	613.4	576.5	550.9	512.5
27.5°	986.6	954.5	917.6	876.0	845.6	797.6	751.1	711.1	667.8	627.8	584.6
30°	1178.8	1132.3	1093.9	1053.8	992.9	946.4	892.1	837.6	778.3	738.3	672.6
32.5°	1409.4	1359.6	1302.0	1244.3	1188.4	1122.7	1055.4	988.2	922.5	848.8	781.5
35°	1691.2	1632.0	1566.3	1503.8	1417.3	1346.9	1262.0	1169.1	1095.4	1010.5	925.6
37.5°	2064.4	1966.6	1908.9	1843.4	1726.4	1630.3	1535.9	1443.0	1313.3	1223.5	1103.5
40°	2532.0	2474.3	2379.8	2274.1	2168.4	2041.9	1913.8	1790.5	1639.9	1515.1	1375.7
42.5°	3081.3	2996.5	2900.4	2748.2	2640.9	2491.9	2346.2	2182.9	1998.7	1838.5	1675.2
45°	3597.0	3496.0	3422.4	3270.3	3158.1	2982.0	2805.9	2632.9	2419.9	2213.3	2024.3
47.5°	4154.3	4071.0	3949.3	3826.0	3712.3	3513.7	3323.1	3113.4	2889.1	2644.1	2399.0
50°	4644.4	4578.7	4495.4	4346.5	4220.0	4053.4	3829.2	3600.1	3316.7	3073.3	2794.7
52.5°	5060.7	5009.5	4892.6	4786.9	4673.2	4516.3	4316.1	4096.7	3790.7	3523.3	3206.2
55°	5552.4	5515.5	5413.1	5347.4	5246.5	5096.0	4908.6	4705.2	4381.8	4090.2	3731.5
57.5°	6358.0	6329.1	6239.5	6212.2	6113.0	5981.6	5751.0	5533.2	5155.2	4793.3	4383.3
60°	7692.0	7634.4	7503.0	7435.8	7226.0	7049.8	6750.4	6450.9	5994.4	5533.2	5039.9
62.5°	9120.5	8958.8	8708.9	8494.4	8196.5	7890.6	7490.3	7032.2	6497.2	5949.6	5382.7
65°	9890.8	9615.5	9299.9	8958.8	8572.8	8122.8	7618.3	7069.0	6494.1	5915.9	5317.0
66°	9978.9	9668.3	9333.5	8954.0	8524.8	8045.9	7533.4	6956.9	6359.5	5795.9	5196.8
67.5°	9868.5	9543.3	9189.4	8768.3	8303.8	7807.4	7269.2	6670.2	6095.3	5523.6	4940.7
70°	9095.0	8771.4	8455.9	8012.3	7517.5	7017.8	6508.5	5839.1	5294.5	4769.3	4250.4
72.5°	7262.8	7043.4	6731.1	6351.5	5869.5	5283.3	4858.9	4260.0	3787.6	3278.3	2876.3
75°	4538.7	4229.6	3843.6	3359.9	2991.6	2516.0	2267.7	1812.9	1543.9	1308.4	1081.0
77.5°	2320.6	2088.3	1817.7	1545.5	1284.5	1025.0	792.7	560.5	377.9	262.6	195.4
80°	1917.0	1712.0	1487.8	1239.6	1009.0	783.1	563.8	384.4	245.0	160.2	124.9
82.5°	1583.9	1411.0	1210.7	980.1	779.9	615.0	427.6	278.7	173.0	112.1	88.1
85°	674.2	611.8	472.4	374.8	281.8	208.2	145.7	97.7	68.8	56.1	51.2
87.5°	28.8	32.0	30.4	24.0	17.6	17.6	16.0	12.8	12.8	12.8	12.8
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: P163562

CATALOG NUMBER: LDRL-SL3-F06-E-HSS

**CANDELA DISTRIBUTION (continued):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4	251.4
2.5°	262.6	261.0	259.4	259.4	257.9	256.3	246.7	238.6	229.0	222.6	216.2
5°	273.8	272.2	269.1	267.5	264.2	262.6	241.8	224.2	209.8	198.6	190.6
7.5°	285.1	283.4	278.7	273.8	272.2	269.1	235.4	213.0	193.8	181.0	173.0
10°	299.5	294.7	289.9	283.4	278.7	273.8	229.0	200.2	179.4	168.1	160.2
12.5°	320.3	312.2	304.3	296.3	289.9	281.8	225.8	189.0	168.1	155.3	147.3
15°	344.3	333.1	323.5	313.9	302.6	294.7	219.4	179.4	158.5	145.7	136.1
17.5°	366.7	354.0	339.5	325.1	313.9	302.6	213.0	169.8	148.9	136.1	126.5
20°	398.7	379.5	362.0	344.3	328.3	313.9	203.4	160.2	141.0	126.5	116.9
22.5°	434.0	411.6	389.1	365.1	344.3	325.1	195.4	152.2	132.9	118.5	107.3
25°	478.9	451.6	421.2	390.8	366.7	341.1	187.3	144.1	124.9	110.5	99.3
27.5°	541.3	502.8	469.3	430.8	394.0	365.1	181.0	137.7	116.9	102.5	91.2
30°	626.2	570.1	517.3	475.6	432.4	390.8	174.5	129.7	110.5	94.5	81.6
32.5°	720.7	655.0	594.2	531.7	477.3	429.2	168.1	123.3	102.5	86.5	75.3
35°	837.6	754.3	672.6	600.5	534.9	470.8	161.8	116.9	96.1	78.5	67.3
37.5°	1005.8	901.7	794.4	701.5	616.6	531.7	156.9	110.5	88.1	70.4	59.2
40°	1236.4	1101.9	970.5	844.0	733.5	627.8	150.6	104.1	81.6	64.1	52.8
42.5°	1486.2	1322.9	1149.9	1007.4	855.2	722.3	144.1	97.7	75.3	57.7	46.5
45°	1796.9	1593.5	1383.7	1189.9	1004.1	832.8	137.7	91.2	67.3	51.2	40.0
47.5°	2136.4	1876.9	1639.9	1396.5	1175.5	970.5	129.7	86.5	60.8	44.9	35.3
50°	2485.5	2211.7	1912.2	1635.1	1372.5	1108.2	121.7	78.5	54.5	40.0	28.8
52.5°	2861.9	2538.4	2232.5	1888.1	1582.3	1289.2	113.7	72.0	49.6	35.3	24.0
55°	3340.7	2978.8	2620.0	2234.1	1865.8	1499.0	105.7	64.1	43.2	30.4	19.2
57.5°	3942.9	3513.7	3073.3	2637.7	2190.9	1774.4	99.3	56.1	36.9	25.7	16.0
60°	4511.4	4010.2	3476.8	2975.6	2471.1	1985.8	89.7	49.6	32.0	20.8	16.0
62.5°	4806.1	4234.3	3659.4	3106.9	2568.8	2061.1	80.0	41.6	27.2	17.6	14.4
65°	4734.0	4151.1	3593.8	3036.5	2509.6	2013.1	70.4	36.9	24.0	16.0	14.4
66°	4629.9	4053.4	3492.9	2962.8	2459.9	1961.8	65.7	35.3	22.4	16.0	12.8
67.5°	4402.6	3845.2	3310.3	2817.1	2323.8	1864.2	59.2	32.0	20.8	14.4	12.8
70°	3760.3	3254.2	2826.7	2387.8	1985.8	1571.0	48.0	27.2	17.6	12.8	12.8
72.5°	2488.8	2144.4	1859.3	1599.9	1337.3	1037.8	40.0	22.4	14.4	12.8	11.2
75°	938.5	848.8	728.7	655.0	571.7	501.3	32.0	14.4	11.2	11.2	11.2
77.5°	166.5	153.7	136.1	124.9	115.3	105.7	25.7	9.6	9.6	11.2	11.2
80°	112.1	104.1	94.5	86.5	80.0	72.0	17.6	8.0	9.6	9.6	11.2
82.5°	80.0	75.3	70.4	64.1	59.2	52.8	11.2	8.0	9.6	9.6	9.6
85°	48.0	44.9	41.6	38.4	33.6	32.0	8.0	8.0	8.0	9.6	9.6
87.5°	12.8	11.2	12.8	12.8	9.6	11.2	6.4	6.4	6.4	8.0	8.0
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: P163562

CATALOG NUMBER: LDRL-SL3-F06-E-HSS

**CANDELA DISTRIBUTION (continued):**

	145°	155°	165°	175°	180°
0°	251.4	251.4	251.4	251.4	251.4
2.5°	213.0	213.0	209.8	214.6	214.6
5°	184.2	184.2	182.6	184.2	184.2
7.5°	168.1	166.5	166.5	166.5	168.1
10°	153.7	152.2	152.2	152.2	152.2
12.5°	141.0	139.3	137.7	139.3	139.3
15°	129.7	126.5	126.5	126.5	126.5
17.5°	120.1	116.9	115.3	115.3	115.3
20°	110.5	105.7	105.7	105.7	105.7
22.5°	100.8	96.1	96.1	96.1	96.1
25°	91.2	86.5	86.5	86.5	86.5
27.5°	83.3	78.5	78.5	78.5	78.5
30°	73.7	70.4	70.4	72.0	70.4
32.5°	67.3	62.4	62.4	64.1	64.1
35°	59.2	56.1	56.1	56.1	56.1
37.5°	51.2	48.0	48.0	48.0	48.0
40°	44.9	41.6	40.0	41.6	41.6
42.5°	38.4	35.3	33.6	33.6	33.6
45°	33.6	28.8	27.2	28.8	28.8
47.5°	27.2	24.0	24.0	25.7	25.7
50°	20.8	20.8	22.4	25.7	25.7
52.5°	19.2	19.2	22.4	25.7	25.7
55°	17.6	19.2	22.4	24.0	25.7
57.5°	16.0	19.2	22.4	24.0	24.0
60°	16.0	17.6	20.8	24.0	24.0
62.5°	14.4	16.0	19.2	22.4	22.4
65°	14.4	16.0	19.2	22.4	22.4
66°	14.4	16.0	19.2	22.4	22.4
67.5°	14.4	16.0	19.2	22.4	22.4
70°	14.4	16.0	19.2	20.8	20.8
72.5°	12.8	14.4	17.6	20.8	20.8
75°	12.8	14.4	17.6	20.8	20.8
77.5°	12.8	14.4	17.6	20.8	20.8
80°	12.8	14.4	17.6	19.2	20.8
82.5°	11.2	14.4	16.0	19.2	19.2
85°	11.2	12.8	16.0	17.6	19.2
87.5°	9.6	11.2	12.8	16.0	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)