

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: P163531

Luminaire Tested: **LDRL-SL3-F03-E-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P163531  
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-F03-E-7030-HSS  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (21) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3804.2 lumens  
Efficiency: N/A  
Efficacy: 48.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G1

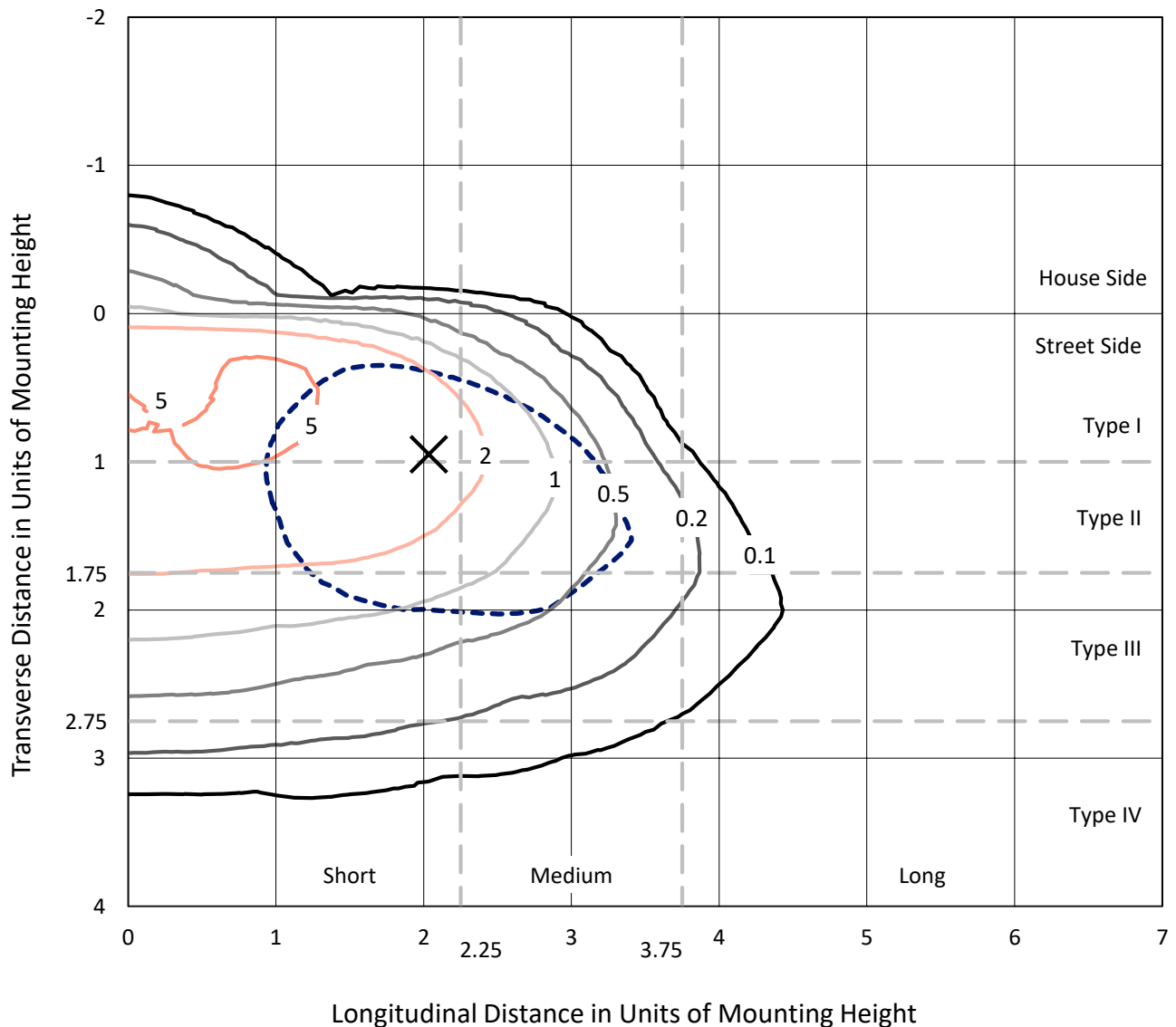
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P163531  
 CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

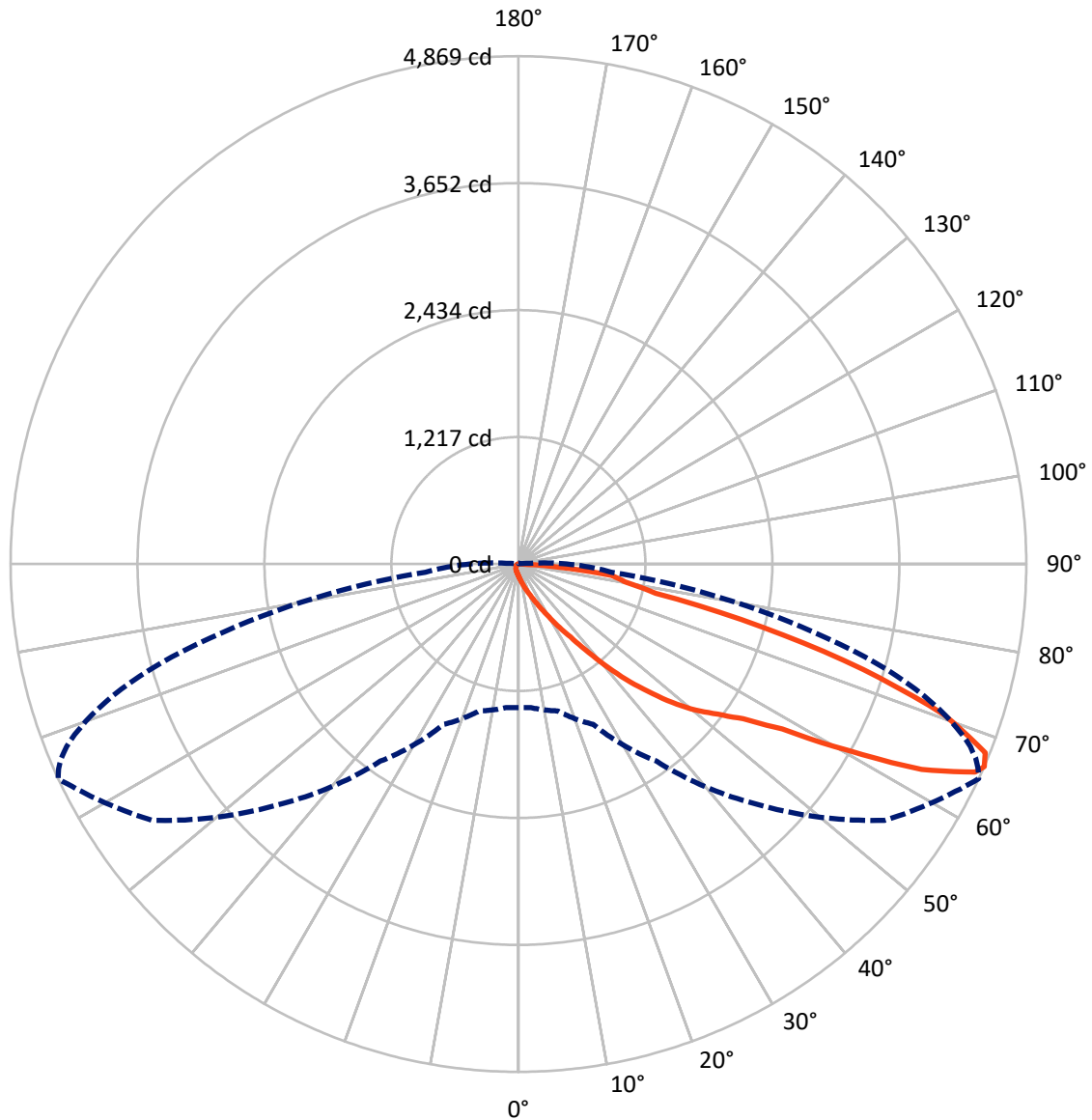


Based on 10 foot mounting height. Maximum calculated value = 6.3 fc  
 Type III - Short - Non-Cutoff

REPORT NUMBER: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	82.4	0.0	82.4
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	3721.7	0.0	3721.7
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	3804.2	0.0	3804.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.9	0.3
10°-20°	54.5	1.4
20°-30°	117.6	3.1
30°-40°	251.0	6.6
40°-50°	555.2	14.6
50°-60°	940.8	24.7
60°-70°	1255.5	33.0
70°-80°	553.0	14.5
80°-90°	63.7	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°	3804.2	100.0
0°-180°	3804.2	100.0



REPORT NUMBER: P163531

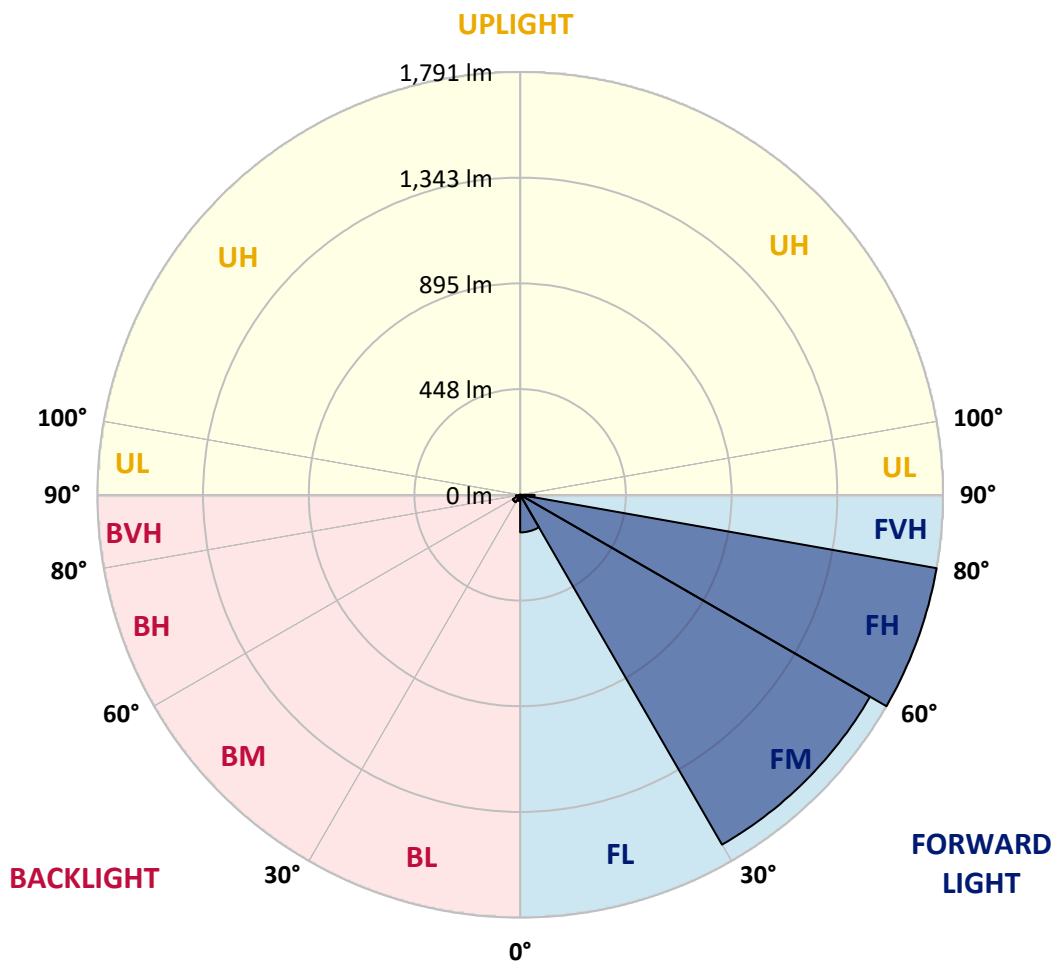
CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	158.9	4.2			
FM	(30°-60°)	1710.9	45.0			
FH	(60°-80°)	1790.8	47.1			G1/1800
FVH	(80°-90°)	61.2	1.6			G1/100
BL	(0°-30°)	26.0	0.7	B0/110		
BM	(30°-60°)	36.2	1.0	B0/220		
BH	(60°-80°)	17.7	0.5	B0/110		G0/110
BVH	(80°-90°)	2.5	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-G1**

Type III Short





REPORT NUMBER: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
2.5°	144.8	144.1	141.1	141.1	136.8	133.8	130.2	126.5	126.5	125.8	125.0
5°	191.6	187.2	186.5	178.5	171.9	162.4	153.6	141.9	140.4	139.0	138.2
7.5°	243.5	242.8	236.2	226.7	213.6	196.0	178.5	159.4	156.5	155.0	152.1
10°	310.8	307.2	298.4	282.3	262.6	239.1	210.6	180.6	177.0	174.1	172.6
12.5°	375.2	368.6	363.5	343.0	318.1	283.8	249.4	206.2	203.3	199.6	193.8
15°	435.2	429.3	420.5	403.0	375.2	332.1	291.8	239.1	231.9	226.7	222.4
17.5°	482.0	478.3	468.1	448.3	418.3	380.3	332.1	272.8	267.0	260.4	252.3
20°	526.6	521.5	505.4	478.3	446.2	416.9	379.6	316.7	308.6	300.6	291.8
22.5°	569.0	563.9	537.5	492.9	458.5	446.2	433.0	366.4	354.0	347.4	338.6
25°	628.2	617.3	576.3	505.4	459.3	468.8	491.5	430.8	419.1	409.6	395.7
27.5°	708.0	693.3	629.0	523.6	462.2	493.7	558.8	509.0	496.6	485.6	470.3
30°	797.9	788.4	711.6	567.5	483.4	530.3	634.1	608.5	593.9	580.7	562.4
32.5°	888.6	875.4	799.4	650.9	540.5	601.2	728.4	724.1	705.1	692.6	672.8
35°	968.3	961.7	905.4	787.7	670.7	725.5	854.2	859.4	842.5	829.4	807.4
37.5°	1022.5	1022.5	1011.5	934.7	877.6	918.6	1039.3	1040.0	1023.2	993.2	982.2
40°	1050.2	1058.3	1097.8	1112.4	1109.5	1162.2	1282.1	1268.9	1255.0	1239.7	1203.1
42.5°	1107.3	1114.6	1198.7	1299.6	1365.5	1435.0	1517.6	1513.2	1496.4	1468.6	1435.0
45°	1203.8	1213.3	1313.5	1473.7	1609.0	1707.7	1760.4	1739.9	1723.1	1696.8	1679.2
47.5°	1326.7	1345.0	1458.3	1656.5	1819.6	1982.7	2037.6	1983.5	1968.8	1948.4	1919.8
50°	1457.6	1475.2	1595.8	1822.6	2006.9	2201.4	2292.8	2201.4	2180.2	2173.6	2141.5
52.5°	1571.0	1585.6	1701.9	1950.6	2150.2	2378.4	2511.5	2390.8	2375.5	2353.5	2330.1
55°	1638.3	1650.0	1758.9	2012.0	2247.5	2537.9	2722.9	2616.8	2594.2	2585.4	2551.7
57.5°	1660.9	1672.6	1770.6	2020.0	2300.2	2683.4	2979.6	2983.2	2956.2	2924.7	2914.5
60°	1660.9	1674.1	1756.7	2000.3	2351.3	2838.4	3321.9	3626.9	3568.3	3562.5	3525.2
62.5°	1592.2	1604.6	1688.0	1939.6	2420.1	3047.6	3798.7	4337.0	4320.2	4282.2	4220.7
65°	1443.0	1450.3	1532.2	1784.5	2393.8	3240.0	4211.9	4809.5	4782.4	4707.8	4628.8
66°	1375.7	1381.6	1458.3	1696.0	2307.4	3266.3	4285.1	4868.7	4824.1	4761.2	4672.0
67.5°	1278.4	1288.7	1342.8	1531.5	2100.5	3174.9	4239.0	4827.0	4788.3	4712.2	4622.9
70°	853.5	846.2	1037.1	1175.3	1600.2	2586.8	3803.1	4334.1	4334.8	4299.0	4263.2
72.5°	405.2	409.6	465.2	723.3	1047.3	1728.2	3027.1	3459.4	3509.1	3444.7	3400.1
75°	291.1	297.7	331.3	442.5	624.6	1037.1	1962.3	2419.4	2420.8	2306.7	2205.1
77.5°	84.8	88.5	124.3	272.8	468.1	699.9	1127.1	1345.0	1313.5	1231.6	1154.8
80°	35.1	35.1	36.6	87.0	188.0	475.4	788.4	1035.6	1032.0	1000.5	955.1
82.5°	13.2	13.9	17.6	35.8	44.6	117.0	525.9	898.9	896.6	852.0	819.9
85°	1.4	1.4	4.4	15.3	16.8	21.9	105.3	396.4	394.2	396.4	347.4
87.5°	0.0	0.0	0.7	1.4	2.2	2.9	4.4	15.3	16.8	16.1	14.6
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: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

**CANDELA DISTRIBUTION (continued):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
2.5°	125.0	123.6	123.6	122.9	122.9	122.9	122.1	121.4	121.4	120.7	119.9
5°	136.8	135.3	134.6	133.1	132.4	131.6	130.2	129.4	128.0	127.3	126.5
7.5°	150.6	147.8	147.0	144.8	142.6	141.1	139.7	137.5	136.0	133.1	132.4
10°	168.2	164.5	161.6	158.7	156.5	152.9	150.6	147.8	144.8	142.6	140.4
12.5°	190.9	185.8	181.4	178.5	173.3	168.9	164.5	162.4	156.5	153.6	149.9
15°	215.7	209.9	204.8	198.9	195.3	188.0	182.1	175.5	172.6	167.5	161.6
17.5°	247.9	238.4	230.4	224.5	217.2	209.9	203.3	196.7	188.0	182.1	174.8
20°	282.3	274.2	263.3	253.1	244.3	235.5	226.0	217.2	209.2	199.6	190.9
22.5°	326.2	314.5	301.3	291.1	279.4	269.9	256.7	245.0	231.9	219.4	209.2
25°	381.8	366.4	354.0	339.3	325.5	310.8	294.7	280.1	263.3	251.6	234.0
27.5°	450.5	435.9	419.1	400.1	386.2	364.2	343.0	324.7	305.0	286.7	267.0
30°	538.3	517.1	499.5	481.3	453.4	432.2	407.4	382.5	355.4	337.2	307.2
32.5°	643.6	620.9	594.6	568.3	542.7	512.7	482.0	451.3	421.3	387.6	356.9
35°	772.3	745.3	715.3	686.7	647.2	615.1	576.3	533.9	500.3	461.5	422.7
37.5°	942.7	898.1	871.8	841.8	788.4	744.5	701.4	659.0	599.7	558.8	503.9
40°	1156.3	1129.9	1086.8	1038.5	990.2	932.5	874.0	817.7	748.9	691.9	628.2
42.5°	1407.1	1368.4	1324.5	1255.0	1206.0	1138.0	1071.5	996.9	912.8	839.6	765.0
45°	1642.7	1596.6	1562.9	1493.4	1442.2	1361.8	1281.4	1202.4	1105.1	1010.7	924.4
47.5°	1897.2	1859.1	1803.6	1747.2	1695.3	1604.6	1517.6	1421.8	1319.4	1207.5	1095.6
50°	2121.0	2091.0	2052.9	1984.9	1927.2	1851.1	1748.7	1644.1	1514.7	1403.5	1276.3
52.5°	2311.1	2287.7	2234.3	2186.1	2134.1	2062.5	1971.0	1870.8	1731.1	1609.0	1464.2
55°	2535.6	2518.8	2472.0	2442.0	2395.9	2327.2	2241.6	2148.7	2001.0	1867.9	1704.1
57.5°	2903.5	2890.4	2849.4	2837.0	2791.6	2731.7	2626.3	2526.9	2354.3	2189.0	2001.8
60°	3512.8	3486.4	3426.4	3395.7	3299.9	3219.5	3082.7	2946.0	2737.5	2526.9	2301.6
62.5°	4165.1	4091.2	3977.1	3879.2	3743.1	3603.4	3420.6	3211.4	2967.1	2717.0	2458.1
65°	4516.9	4391.1	4247.0	4091.2	3915.0	3709.5	3479.1	3228.3	2965.7	2701.7	2428.1
66°	4557.1	4415.3	4262.4	4089.1	3893.0	3674.4	3440.3	3177.0	2904.2	2646.8	2373.3
67.5°	4506.7	4358.2	4196.6	4004.2	3792.1	3565.4	3319.7	3046.1	2783.6	2522.5	2256.3
70°	4153.4	4005.7	3861.6	3659.0	3433.1	3204.9	2972.3	2666.6	2417.9	2178.0	1941.1
72.5°	3316.7	3216.5	3073.9	2900.6	2680.4	2412.8	2219.0	1945.4	1729.7	1497.1	1313.5
75°	2072.7	1931.6	1755.3	1534.4	1366.2	1149.0	1035.6	827.9	705.1	597.5	493.7
77.5°	1059.7	953.7	830.1	705.8	586.6	468.1	362.0	256.0	172.6	119.9	89.2
80°	875.4	781.8	679.5	566.1	460.8	357.6	257.5	175.5	111.9	73.2	57.0
82.5°	723.3	644.3	552.9	447.6	356.2	280.8	195.3	127.3	79.0	51.2	40.2
85°	307.9	279.4	215.7	171.1	128.7	95.1	66.5	44.6	31.4	25.6	23.4
87.5°	13.2	14.6	13.9	10.9	8.1	8.1	7.3	5.8	5.8	5.8	5.8
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: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

**CANDELA DISTRIBUTION (continued):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
2.5°	119.9	119.2	118.5	118.5	117.8	117.0	112.6	109.0	104.6	101.7	98.7
5°	125.0	124.3	122.9	122.1	120.7	119.9	110.4	102.4	95.8	90.7	87.0
7.5°	130.2	129.4	127.3	125.0	124.3	122.9	107.5	97.3	88.5	82.7	79.0
10°	136.8	134.6	132.4	129.4	127.3	125.0	104.6	91.4	81.9	76.8	73.2
12.5°	146.3	142.6	139.0	135.3	132.4	128.7	103.1	86.3	76.8	70.9	67.3
15°	157.3	152.1	147.8	143.4	138.2	134.6	100.2	81.9	72.4	66.5	62.2
17.5°	167.5	161.6	155.0	148.5	143.4	138.2	97.3	77.5	68.0	62.2	57.8
20°	182.1	173.3	165.3	157.3	149.9	143.4	92.9	73.2	64.4	57.8	53.4
22.5°	198.2	188.0	177.7	166.8	157.3	148.5	89.2	69.5	60.7	54.1	49.0
25°	218.7	206.2	192.4	178.5	167.5	155.8	85.5	65.8	57.0	50.4	45.3
27.5°	247.2	229.6	214.3	196.7	179.9	166.8	82.7	62.9	53.4	46.8	41.7
30°	286.0	260.4	236.2	217.2	197.5	178.5	79.7	59.2	50.4	43.2	37.3
32.5°	329.1	299.1	271.3	242.8	218.0	196.0	76.8	56.3	46.8	39.5	34.4
35°	382.5	344.5	307.2	274.2	244.3	215.0	73.9	53.4	43.9	35.8	30.7
37.5°	459.3	411.8	362.8	320.3	281.6	242.8	71.7	50.4	40.2	32.2	27.1
40°	564.6	503.2	443.2	385.4	335.0	286.7	68.8	47.5	37.3	29.3	24.1
42.5°	678.7	604.1	525.1	460.0	390.6	329.8	65.8	44.6	34.4	26.3	21.2
45°	820.6	727.7	631.9	543.4	458.5	380.3	62.9	41.7	30.7	23.4	18.3
47.5°	975.6	857.2	748.9	637.7	536.8	443.2	59.2	39.5	27.8	20.5	16.1
50°	1135.1	1010.0	873.3	746.7	626.8	506.1	55.6	35.8	24.9	18.3	13.2
52.5°	1307.0	1159.2	1019.5	862.3	722.6	588.7	51.9	32.9	22.7	16.1	10.9
55°	1525.6	1360.4	1196.5	1020.2	852.0	684.6	48.3	29.3	19.7	13.9	8.8
57.5°	1800.6	1604.6	1403.5	1204.5	1000.5	810.3	45.3	25.6	16.8	11.7	7.3
60°	2060.3	1831.3	1587.8	1358.9	1128.5	906.9	40.9	22.7	14.6	9.5	7.3
62.5°	2194.8	1933.7	1671.2	1418.8	1173.1	941.3	36.6	19.0	12.4	8.1	6.6
65°	2161.9	1895.7	1641.2	1386.7	1146.1	919.3	32.2	16.8	10.9	7.3	6.6
66°	2114.4	1851.1	1595.1	1353.0	1123.4	895.9	30.0	16.1	10.2	7.3	5.8
67.5°	2010.5	1756.0	1511.7	1286.5	1061.2	851.3	27.1	14.6	9.5	6.6	5.8
70°	1717.3	1486.1	1290.9	1090.5	906.9	717.5	21.9	12.4	8.1	5.8	5.8
72.5°	1136.6	979.3	849.1	730.6	610.7	473.9	18.3	10.2	6.6	5.8	5.1
75°	428.6	387.6	332.8	299.1	261.1	228.9	14.6	6.6	5.1	5.1	5.1
77.5°	76.0	70.2	62.2	57.0	52.7	48.3	11.7	4.4	4.4	5.1	5.1
80°	51.2	47.5	43.2	39.5	36.6	32.9	8.1	3.7	4.4	4.4	5.1
82.5°	36.6	34.4	32.2	29.3	27.1	24.1	5.1	3.7	4.4	4.4	4.4
85°	21.9	20.5	19.0	17.6	15.3	14.6	3.7	3.7	3.7	4.4	4.4
87.5°	5.8	5.1	5.8	5.8	4.4	5.1	2.9	2.9	2.9	3.7	3.7
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: P163531

CATALOG NUMBER: LDRL-SL3-F03-E-7030-HSS

**CANDELA DISTRIBUTION (continued):**

	145°	155°	165°	175°	180°
0°	114.8	114.8	114.8	114.8	114.8
2.5°	97.3	97.3	95.8	98.0	98.0
5°	84.1	84.1	83.4	84.1	84.1
7.5°	76.8	76.0	76.0	76.0	76.8
10°	70.2	69.5	69.5	69.5	69.5
12.5°	64.4	63.6	62.9	63.6	63.6
15°	59.2	57.8	57.8	57.8	57.8
17.5°	54.8	53.4	52.7	52.7	52.7
20°	50.4	48.3	48.3	48.3	48.3
22.5°	46.1	43.9	43.9	43.9	43.9
25°	41.7	39.5	39.5	39.5	39.5
27.5°	38.0	35.8	35.8	35.8	35.8
30°	33.7	32.2	32.2	32.9	32.2
32.5°	30.7	28.5	28.5	29.3	29.3
35°	27.1	25.6	25.6	25.6	25.6
37.5°	23.4	21.9	21.9	21.9	21.9
40°	20.5	19.0	18.3	19.0	19.0
42.5°	17.6	16.1	15.3	15.3	15.3
45°	15.3	13.2	12.4	13.2	13.2
47.5°	12.4	10.9	10.9	11.7	11.7
50°	9.5	9.5	10.2	11.7	11.7
52.5°	8.8	8.8	10.2	11.7	11.7
55°	8.1	8.8	10.2	10.9	11.7
57.5°	7.3	8.8	10.2	10.9	10.9
60°	7.3	8.1	9.5	10.9	10.9
62.5°	6.6	7.3	8.8	10.2	10.2
65°	6.6	7.3	8.8	10.2	10.2
66°	6.6	7.3	8.8	10.2	10.2
67.5°	6.6	7.3	8.8	10.2	10.2
70°	6.6	7.3	8.8	9.5	9.5
72.5°	5.8	6.6	8.1	9.5	9.5
75°	5.8	6.6	8.1	9.5	9.5
77.5°	5.8	6.6	8.1	9.5	9.5
80°	5.8	6.6	8.1	8.8	9.5
82.5°	5.1	6.6	7.3	8.8	8.8
85°	5.1	5.8	7.3	8.1	8.8
87.5°	4.4	5.1	5.8	7.3	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)