

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: P163536

Luminaire Tested: **LDRL-SL3-E04-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163536
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-E04-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6144.2 lumens
Efficiency: N/A
Efficacy: 63.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

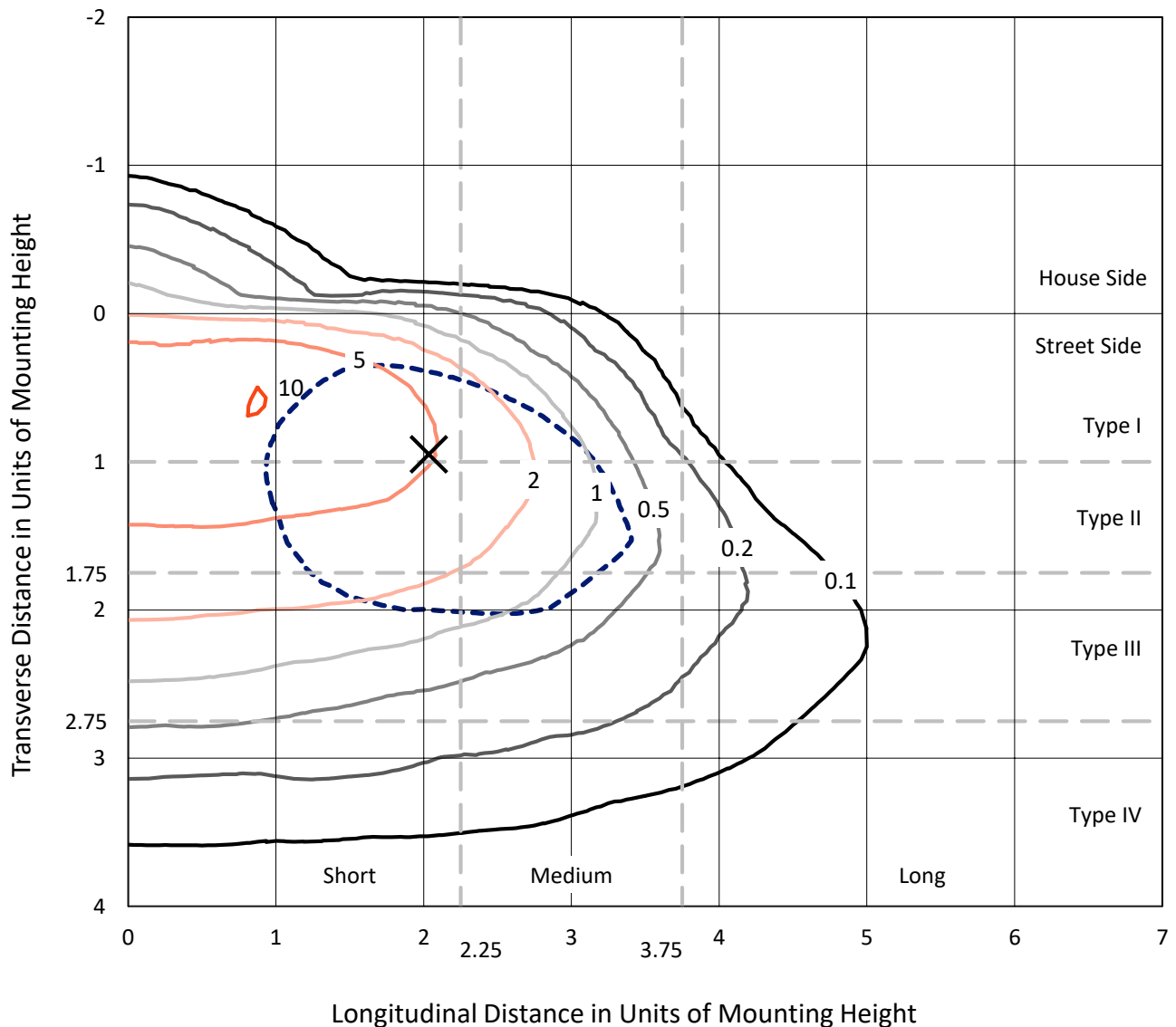
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P163536
 CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

Iso-Footcandle Lines of Horizontal Illumination

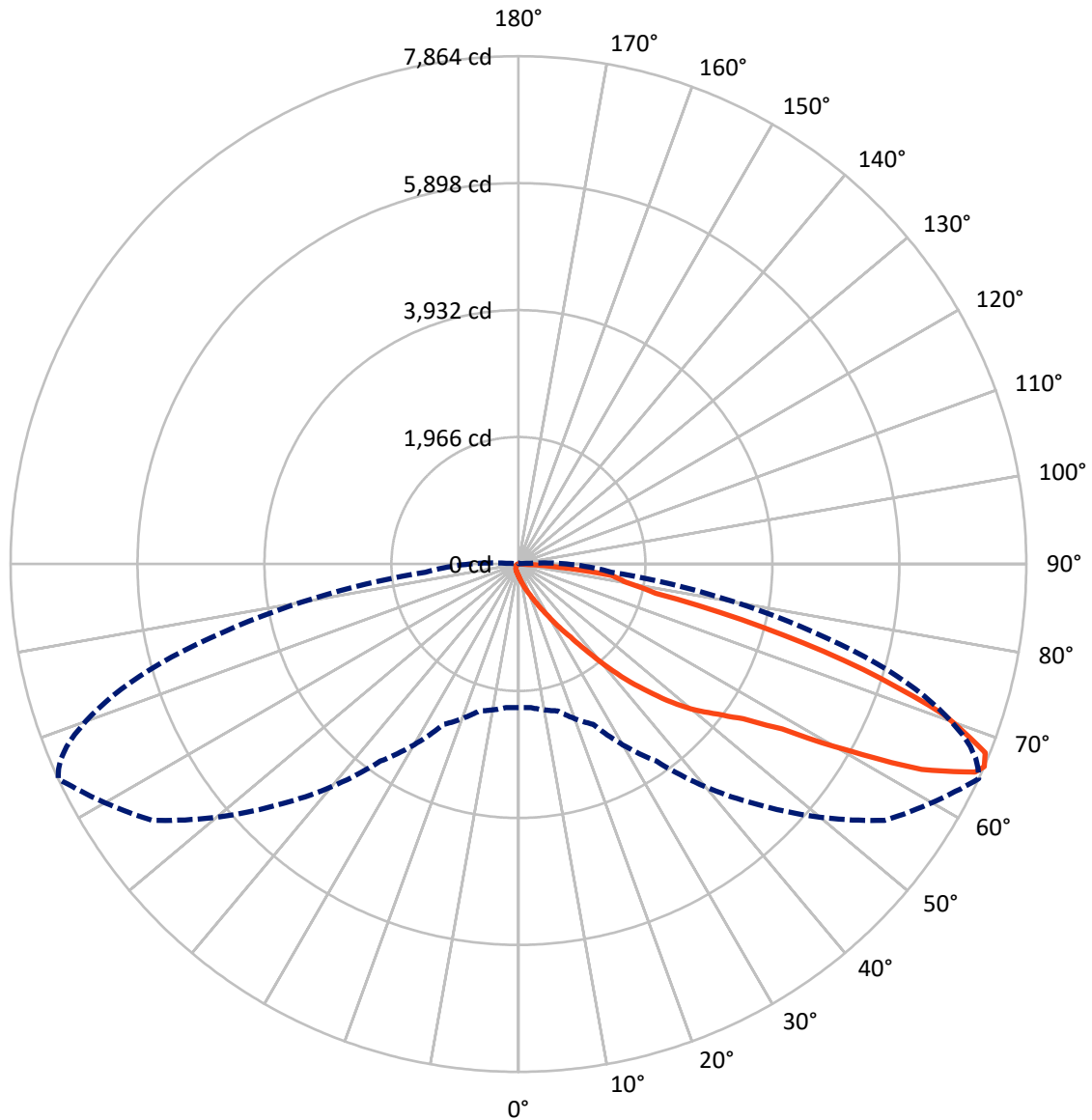
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.1 fc
 Type III - Short - Non-Cutoff

REPORT NUMBER: P163536
CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P163536

CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	133.1	0.0	133.1
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	6011.1	0.0	6011.1
	% Fixture	97.8	0.0	97.8
Total	Lumens	6144.2	0.0	6144.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.8	0.3
10°-20°	88.0	1.4
20°-30°	189.9	3.1
30°-40°	405.5	6.6
40°-50°	896.7	14.6
50°-60°	1519.6	24.7
60°-70°	2027.8	33.0
70°-80°	893.2	14.5
80°-90°	102.9	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°	6144.2	100.0
0°-180°	6144.2	100.0



REPORT NUMBER: P163536

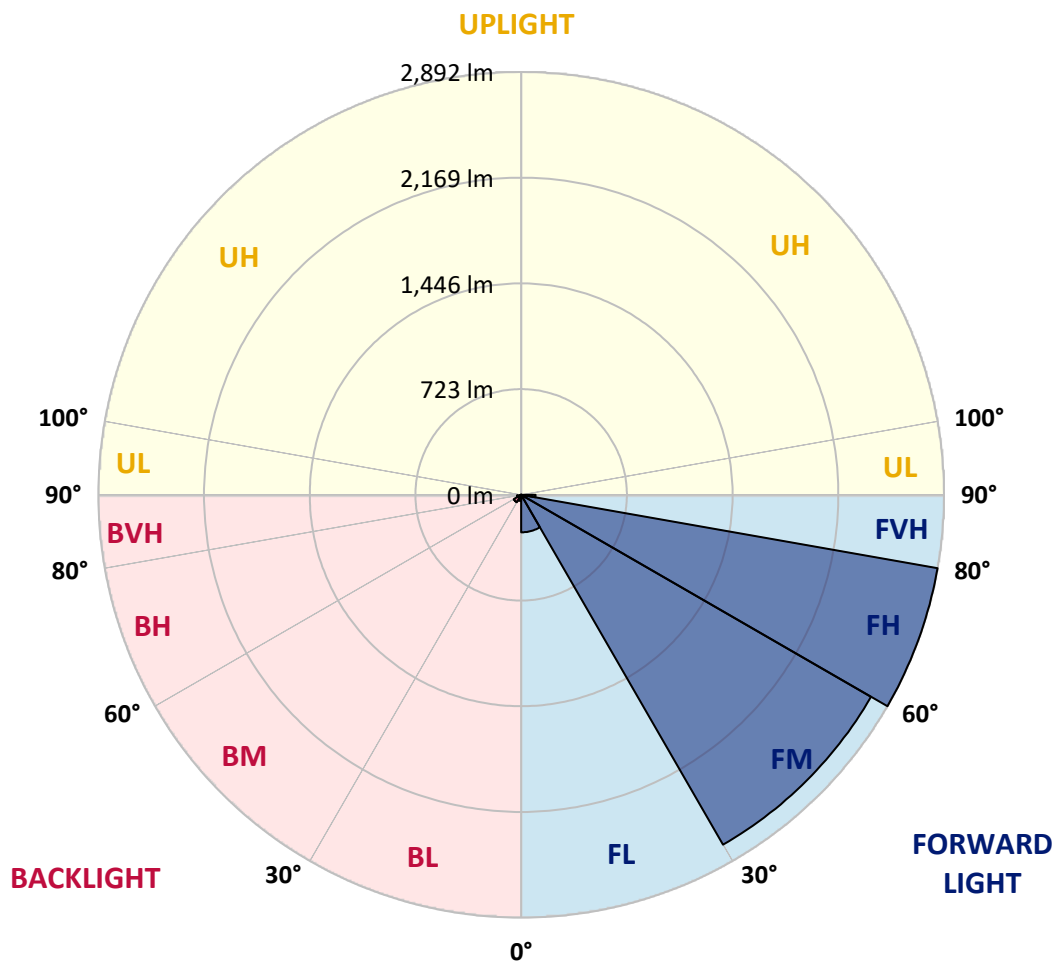
CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	256.6	4.2			
FM	(30°-60°)	2763.3	45.0			
FH	(60°-80°)	2892.4	47.1			G2/5000
FVH	(80°-90°)	98.8	1.6			G1/100
BL	(0°-30°)	42.0	0.7	B0/110		
BM	(30°-60°)	58.5	1.0	B0/220		
BH	(60°-80°)	28.5	0.5	B0/110		G0/110
BVH	(80°-90°)	4.1	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: P163536

CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4
2.5°	233.9	232.7	228.0	228.0	220.9	216.1	210.3	204.4	204.4	203.2	202.0
5°	309.5	302.4	301.2	288.3	277.6	262.2	248.1	229.1	226.8	224.5	223.2
7.5°	393.3	392.2	381.6	366.2	345.0	316.6	288.3	257.5	252.8	250.4	245.7
10°	502.1	496.1	482.0	455.9	424.1	386.2	340.2	291.8	285.8	281.2	278.8
12.5°	606.0	595.4	587.1	554.0	513.8	458.4	402.8	333.1	328.4	322.4	313.0
15°	702.8	693.4	679.2	650.9	606.0	536.3	471.3	386.2	374.5	366.2	359.1
17.5°	778.5	772.5	756.0	724.1	675.7	614.3	536.3	440.6	431.2	420.5	407.5
20°	850.5	842.3	816.2	772.5	720.6	673.3	613.0	511.5	498.5	485.5	471.3
22.5°	919.0	910.7	868.2	796.1	740.6	720.6	699.3	591.8	571.8	561.1	546.9
25°	1014.7	997.0	930.8	816.2	741.9	757.2	793.8	695.8	676.8	661.5	639.1
27.5°	1143.4	1119.8	1015.9	845.8	746.5	797.3	902.5	822.2	802.1	784.4	759.5
30°	1288.8	1273.4	1149.4	916.6	780.8	856.4	1024.1	982.8	959.2	937.9	908.4
32.5°	1435.2	1413.9	1291.1	1051.3	872.9	971.0	1176.5	1169.5	1138.8	1118.7	1086.7
35°	1563.9	1553.4	1462.4	1272.2	1083.2	1171.8	1379.7	1388.0	1360.8	1339.6	1304.1
37.5°	1651.4	1651.4	1633.7	1509.7	1417.5	1483.6	1678.6	1679.8	1652.6	1604.1	1586.5
40°	1696.3	1709.3	1773.1	1796.7	1792.0	1877.0	2070.7	2049.5	2027.1	2002.2	1943.2
42.5°	1788.4	1800.3	1936.1	2099.1	2205.4	2317.6	2451.1	2444.0	2416.9	2371.9	2317.6
45°	1944.3	1959.7	2121.5	2380.2	2598.7	2758.2	2843.3	2810.2	2783.0	2740.5	2712.1
47.5°	2142.8	2172.3	2355.4	2675.5	2938.9	3202.4	3291.0	3203.6	3179.9	3146.9	3100.8
50°	2354.3	2382.6	2577.5	2943.7	3241.4	3555.6	3703.2	3555.6	3521.3	3510.7	3458.7
52.5°	2537.4	2561.0	2748.7	3150.4	3472.9	3841.4	4056.4	3861.5	3836.7	3801.3	3763.4
55°	2646.0	2664.9	2840.9	3249.6	3630.0	4099.0	4397.8	4226.5	4189.9	4175.8	4121.4
57.5°	2682.6	2701.5	2859.8	3262.6	3715.1	4334.0	4812.4	4818.3	4774.6	4723.8	4707.3
60°	2682.6	2703.9	2837.4	3230.7	3797.7	4584.4	5365.2	5857.9	5763.3	5753.9	5693.7
62.5°	2571.6	2591.6	2726.3	3132.7	3908.8	4922.3	6135.4	7004.8	6977.7	6916.3	6817.0
65°	2330.7	2342.4	2474.7	2882.2	3866.2	5233.0	6802.9	7767.9	7724.2	7603.8	7476.2
66°	2221.9	2231.4	2355.4	2739.3	3726.8	5275.5	6921.0	7863.6	7791.5	7690.0	7545.9
67.5°	2064.8	2081.3	2168.8	2473.6	3392.5	5127.8	6846.5	7796.3	7733.7	7610.8	7466.7
70°	1378.5	1366.7	1675.0	1898.3	2584.6	4178.1	6142.5	7000.1	7001.3	6943.4	6885.6
72.5°	654.4	661.5	751.3	1168.3	1691.5	2791.3	4889.2	5587.4	5667.7	5563.7	5491.6
75°	470.1	480.8	535.1	714.7	1008.8	1675.0	3169.3	3907.6	3909.9	3725.7	3561.5
77.5°	137.0	142.9	200.8	440.6	756.0	1130.4	1820.3	2172.3	2121.5	1989.2	1865.2
80°	56.7	56.7	59.0	140.6	303.6	767.8	1273.4	1672.7	1666.8	1616.0	1542.7
82.5°	21.3	22.4	28.4	57.9	72.0	189.0	849.3	1451.8	1448.2	1376.2	1324.2
85°	2.3	2.3	7.1	24.8	27.2	35.4	170.1	640.2	636.7	640.2	561.1
87.5°	0.0	0.0	1.2	2.3	3.5	4.7	7.1	24.8	27.2	26.0	23.6
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: P163536

CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4
2.5°	202.0	199.6	199.6	198.5	198.5	198.5	197.3	196.1	196.1	194.9	193.7
5°	220.9	218.5	217.4	215.0	213.8	212.6	210.3	209.0	206.7	205.5	204.4
7.5°	243.3	238.6	237.4	233.9	230.3	228.0	225.6	222.1	219.7	215.0	213.8
10°	271.7	265.7	261.1	256.3	252.8	246.9	243.3	238.6	233.9	230.3	226.8
12.5°	308.3	300.0	292.9	288.3	279.9	272.8	265.7	262.2	252.8	248.1	242.1
15°	348.5	339.0	330.8	321.3	315.4	303.6	294.1	283.5	278.8	270.5	261.1
17.5°	400.4	385.1	372.1	362.6	350.8	339.0	328.4	317.8	303.6	294.1	282.3
20°	455.9	442.9	425.3	408.7	394.6	380.4	365.0	350.8	337.9	322.4	308.3
22.5°	526.8	508.0	486.7	470.1	451.3	435.9	414.6	395.7	374.5	354.4	337.9
25°	616.6	591.8	571.8	548.1	525.7	502.1	476.0	452.4	425.3	406.3	378.0
27.5°	727.7	704.0	676.8	646.1	623.7	588.3	554.0	524.5	492.6	463.0	431.2
30°	869.4	835.2	806.8	777.3	732.4	698.1	658.0	617.8	574.1	544.6	496.1
32.5°	1039.5	1002.9	960.3	917.8	876.5	828.1	778.5	728.9	680.4	626.0	576.4
35°	1247.4	1203.7	1155.3	1109.2	1045.4	993.4	930.8	862.3	808.0	745.4	682.7
37.5°	1522.7	1450.5	1408.0	1359.6	1273.4	1202.5	1132.8	1064.3	968.7	902.5	813.9
40°	1867.5	1825.0	1755.3	1677.3	1599.4	1506.1	1411.6	1320.6	1209.6	1117.5	1014.7
42.5°	2272.7	2210.2	2139.3	2027.1	1947.9	1838.0	1730.5	1610.1	1474.2	1356.1	1235.6
45°	2653.1	2578.6	2524.4	2412.1	2329.4	2199.5	2069.6	1942.0	1784.9	1632.5	1493.1
47.5°	3064.2	3002.7	2913.0	2822.0	2738.2	2591.6	2451.1	2296.4	2131.0	1950.3	1769.5
50°	3425.6	3377.2	3315.8	3205.9	3112.6	2989.7	2824.4	2655.4	2446.4	2266.9	2061.3
52.5°	3732.8	3695.0	3608.8	3530.8	3446.9	3331.2	3183.5	3021.7	2796.0	2598.7	2364.8
55°	4095.4	4068.2	3992.7	3944.2	3869.8	3758.8	3620.5	3470.5	3231.9	3016.9	2752.3
57.5°	4689.6	4668.3	4602.2	4582.1	4508.9	4412.0	4241.9	4081.2	3802.5	3535.5	3233.1
60°	5673.6	5631.1	5534.2	5484.6	5329.8	5199.9	4979.0	4758.1	4421.4	4081.2	3717.4
62.5°	6727.2	6607.9	6423.6	6265.4	6045.6	5820.0	5524.7	5186.9	4792.3	4388.4	3970.2
65°	7295.4	7092.3	6859.6	6607.9	6323.2	5991.3	5619.2	5214.1	4790.0	4363.5	3921.8
66°	7360.4	7131.2	6884.3	6604.4	6287.8	5934.6	5556.6	5131.3	4690.7	4275.0	3833.1
67.5°	7278.9	7039.1	6778.0	6467.4	6124.8	5758.6	5361.7	4919.9	4495.9	4074.1	3644.2
70°	6708.4	6469.7	6237.0	5909.8	5544.8	5176.3	4800.6	4306.8	3905.2	3517.8	3135.1
72.5°	5357.0	5195.1	4964.8	4684.8	4329.3	3896.9	3583.9	3142.1	2793.7	2418.0	2121.5
75°	3347.7	3119.7	2835.0	2478.2	2206.6	1855.8	1672.7	1337.1	1138.8	965.1	797.3
77.5°	1711.6	1540.3	1340.7	1139.9	947.4	756.0	584.7	413.4	278.8	193.7	144.1
80°	1413.9	1262.8	1097.4	914.3	744.2	577.6	415.8	283.5	180.7	118.2	92.1
82.5°	1168.3	1040.7	893.0	722.9	575.3	453.6	315.4	205.5	127.6	82.7	65.0
85°	497.3	451.3	348.5	276.4	207.9	153.6	107.5	72.0	50.8	41.4	37.8
87.5°	21.3	23.6	22.4	17.7	13.0	13.0	11.8	9.4	9.4	9.4	9.4
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: P163536

CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4	185.4
2.5°	193.7	192.5	191.4	191.4	190.2	189.0	181.9	176.0	168.9	164.2	159.4
5°	202.0	200.8	198.5	197.3	194.9	193.7	178.4	165.4	154.8	146.5	140.6
7.5°	210.3	209.0	205.5	202.0	200.8	198.5	173.6	157.1	142.9	133.5	127.6
10°	220.9	217.4	213.8	209.0	205.5	202.0	168.9	147.7	132.3	124.0	118.2
12.5°	236.2	230.3	224.5	218.5	213.8	207.9	166.5	139.4	124.0	114.6	108.7
15°	254.0	245.7	238.6	231.6	223.2	217.4	161.8	132.3	116.9	107.5	100.4
17.5°	270.5	261.1	250.4	239.8	231.6	223.2	157.1	125.2	109.8	100.4	93.3
20°	294.1	279.9	267.0	254.0	242.1	231.6	150.0	118.2	104.0	93.3	86.2
22.5°	320.1	303.6	287.0	269.3	254.0	239.8	144.1	112.2	98.1	87.4	79.1
25°	353.2	333.1	310.7	288.3	270.5	251.6	138.2	106.3	92.1	81.5	73.2
27.5°	399.2	370.9	346.1	317.8	290.6	269.3	133.5	101.6	86.2	75.6	67.3
30°	461.9	420.5	381.6	350.8	318.9	288.3	128.7	95.6	81.5	69.7	60.2
32.5°	531.6	483.1	438.3	392.2	352.0	316.6	124.0	91.0	75.6	63.8	55.5
35°	617.8	556.3	496.1	442.9	394.6	347.3	119.3	86.2	70.9	57.9	49.6
37.5°	741.9	665.1	585.9	517.4	454.8	392.2	115.7	81.5	65.0	52.0	43.7
40°	912.0	812.7	715.8	622.5	541.0	463.0	111.1	76.8	60.2	47.3	38.9
42.5°	1096.2	975.8	848.2	743.0	630.8	532.7	106.3	72.0	55.5	42.5	34.3
45°	1325.4	1175.4	1020.6	877.7	740.6	614.3	101.6	67.3	49.6	37.8	29.5
47.5°	1575.8	1384.4	1209.6	1030.0	867.0	715.8	95.6	63.8	44.9	33.1	26.0
50°	1833.3	1631.3	1410.4	1206.1	1012.4	817.4	89.8	57.9	40.2	29.5	21.3
52.5°	2110.9	1872.3	1646.7	1392.7	1167.1	950.9	83.9	53.1	36.6	26.0	17.7
55°	2464.1	2197.2	1932.5	1647.8	1376.2	1105.7	78.0	47.3	31.9	22.4	14.2
57.5°	2908.3	2591.6	2266.9	1945.5	1616.0	1308.8	73.2	41.4	27.2	18.9	11.8
60°	3327.6	2957.9	2564.5	2194.7	1822.7	1464.7	66.1	36.6	23.6	15.3	11.8
62.5°	3545.0	3123.2	2699.1	2291.6	1894.7	1520.3	59.0	30.7	20.1	13.0	10.6
65°	3491.8	3061.8	2650.8	2239.7	1851.0	1484.8	52.0	27.2	17.7	11.8	10.6
66°	3415.0	2989.7	2576.3	2185.3	1814.4	1447.0	48.4	26.0	16.5	11.8	9.4
67.5°	3247.3	2836.2	2441.6	2077.8	1714.0	1375.0	43.7	23.6	15.3	10.6	9.4
70°	2773.6	2400.3	2084.9	1761.2	1464.7	1158.8	35.4	20.1	13.0	9.4	9.4
72.5°	1835.7	1581.7	1371.4	1180.0	986.3	765.5	29.5	16.5	10.6	9.4	8.3
75°	692.2	626.0	537.5	483.1	421.7	369.7	23.6	10.6	8.3	8.3	8.3
77.5°	122.8	113.4	100.4	92.1	85.1	78.0	18.9	7.1	7.1	8.3	8.3
80°	82.7	76.8	69.7	63.8	59.0	53.1	13.0	5.9	7.1	7.1	8.3
82.5°	59.0	55.5	52.0	47.3	43.7	38.9	8.3	5.9	7.1	7.1	7.1
85°	35.4	33.1	30.7	28.4	24.8	23.6	5.9	5.9	5.9	7.1	7.1
87.5°	9.4	8.3	9.4	9.4	7.1	8.3	4.7	4.7	4.7	5.9	5.9
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: P163536

CATALOG NUMBER: LDRL-SL3-E04-E-7030-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	185.4	185.4	185.4	185.4	185.4
2.5°	157.1	157.1	154.8	158.3	158.3
5°	135.8	135.8	134.7	135.8	135.8
7.5°	124.0	122.8	122.8	122.8	124.0
10°	113.4	112.2	112.2	112.2	112.2
12.5°	104.0	102.7	101.6	102.7	102.7
15°	95.6	93.3	93.3	93.3	93.3
17.5°	88.6	86.2	85.1	85.1	85.1
20°	81.5	78.0	78.0	78.0	78.0
22.5°	74.4	70.9	70.9	70.9	70.9
25°	67.3	63.8	63.8	63.8	63.8
27.5°	61.5	57.9	57.9	57.9	57.9
30°	54.4	52.0	52.0	53.1	52.0
32.5°	49.6	46.0	46.0	47.3	47.3
35°	43.7	41.4	41.4	41.4	41.4
37.5°	37.8	35.4	35.4	35.4	35.4
40°	33.1	30.7	29.5	30.7	30.7
42.5°	28.4	26.0	24.8	24.8	24.8
45°	24.8	21.3	20.1	21.3	21.3
47.5°	20.1	17.7	17.7	18.9	18.9
50°	15.3	15.3	16.5	18.9	18.9
52.5°	14.2	14.2	16.5	18.9	18.9
55°	13.0	14.2	16.5	17.7	18.9
57.5°	11.8	14.2	16.5	17.7	17.7
60°	11.8	13.0	15.3	17.7	17.7
62.5°	10.6	11.8	14.2	16.5	16.5
65°	10.6	11.8	14.2	16.5	16.5
66°	10.6	11.8	14.2	16.5	16.5
67.5°	10.6	11.8	14.2	16.5	16.5
70°	10.6	11.8	14.2	15.3	15.3
72.5°	9.4	10.6	13.0	15.3	15.3
75°	9.4	10.6	13.0	15.3	15.3
77.5°	9.4	10.6	13.0	15.3	15.3
80°	9.4	10.6	13.0	14.2	15.3
82.5°	8.3	10.6	11.8	14.2	14.2
85°	8.3	9.4	11.8	13.0	14.2
87.5°	7.1	8.3	9.4	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)