

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: P163833

Luminaire Tested: **LDRL-SL4-F05-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163833
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-F05-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (35) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8359.5 lumens
Efficiency: N/A
Efficacy: 62.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

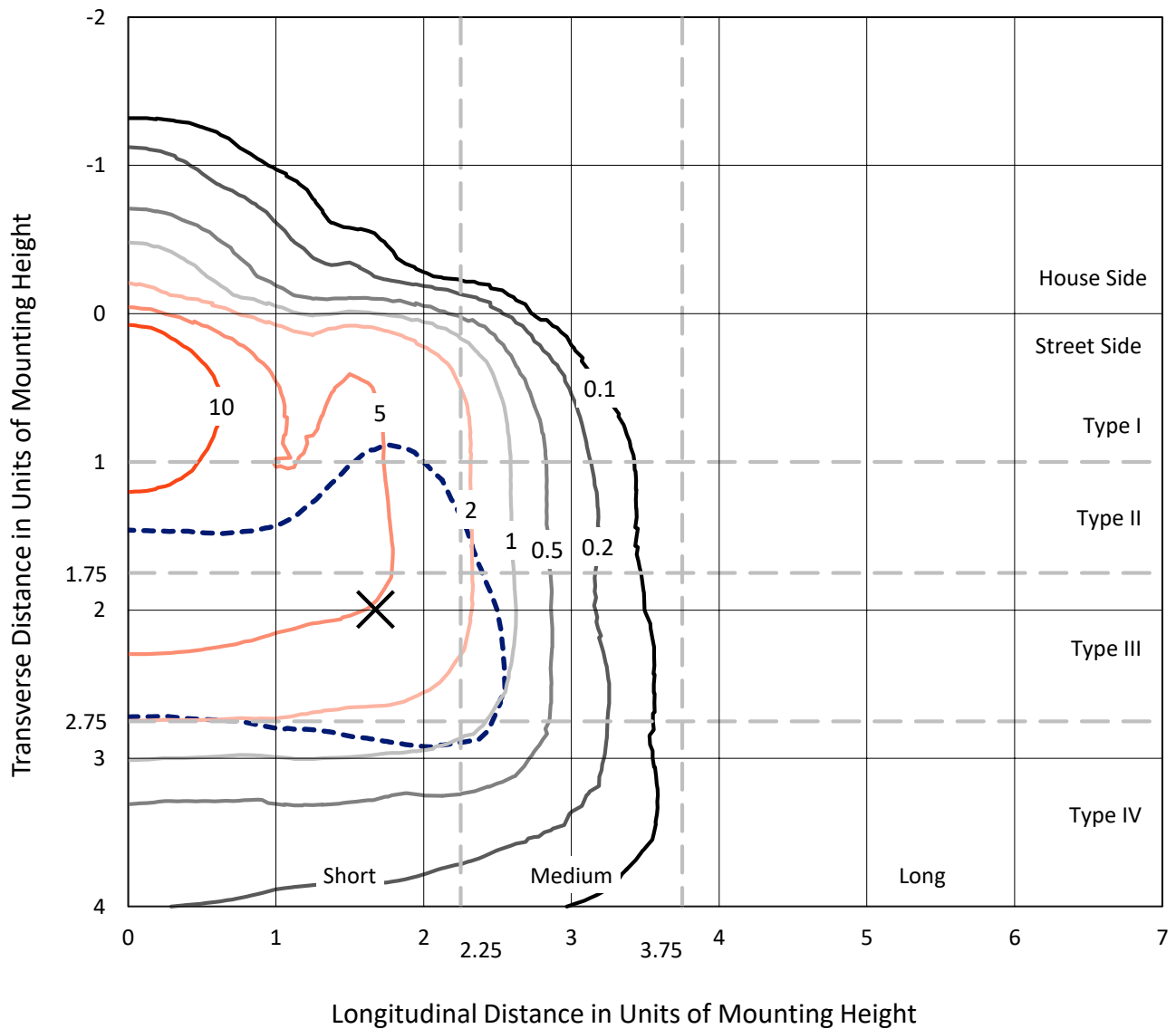
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P163833
 CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

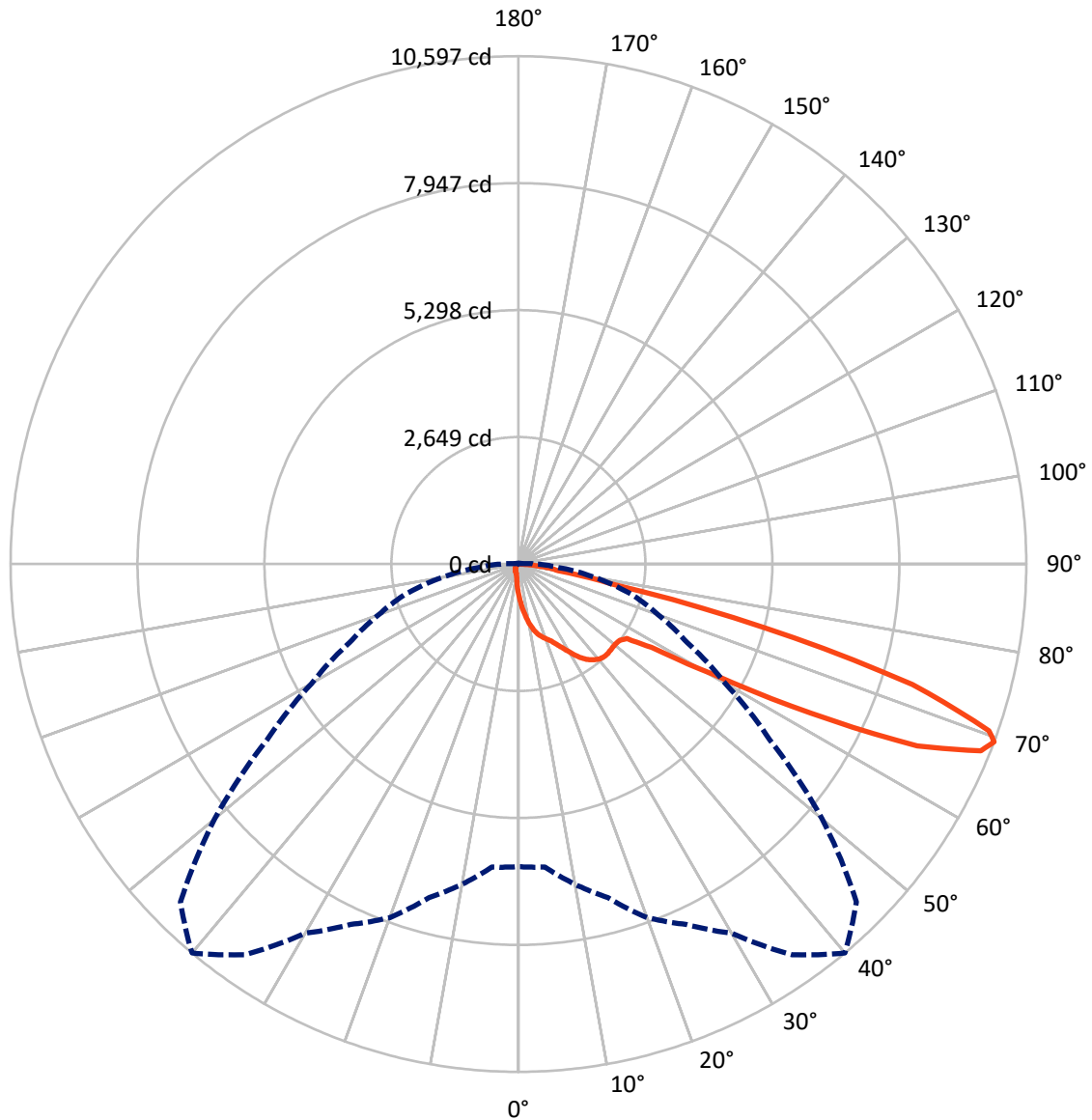


Based on 10 foot mounting height. Maximum calculated value = 18.7 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	248.9	0.0	248.9
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	8110.6	0.0	8110.6
	% Fixture	97.0	0.0	97.0
Total	Lumens	8359.5	0.0	8359.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	0.8
10°-20°	223.7	2.7
20°-30°	428.2	5.1
30°-40°	712.1	8.5
40°-50°	963.6	11.5
50°-60°	1506.9	18.0
60°-70°	3098.2	37.1
70°-80°	1246.7	14.9
80°-90°	115.3	1.4
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°	8359.5	100.0
0°-180°	8359.5	100.0



REPORT NUMBER: P163833

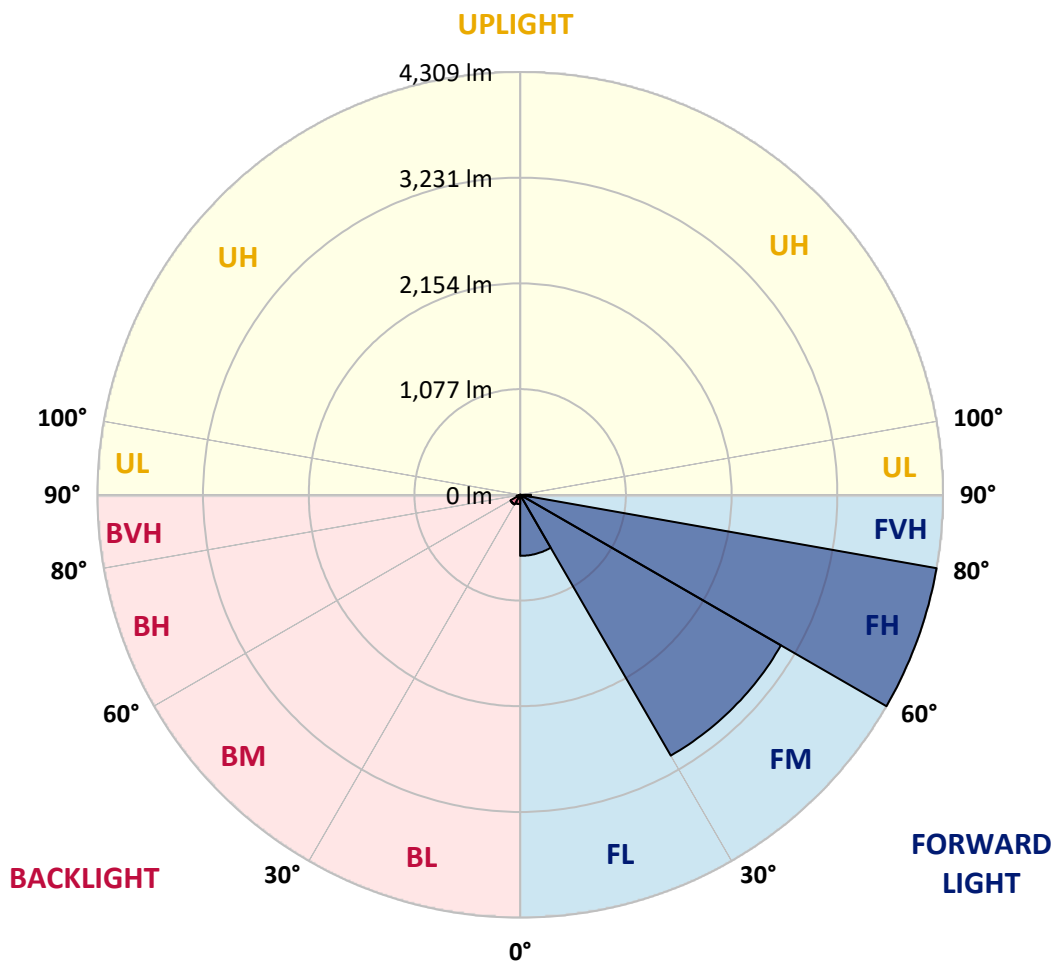
CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	622.1	7.4			
FM (30°-60°)	3068.9	36.7			
FH (60°-80°)	4308.6	51.5			G2/5000
FVH (80°-90°)	111.0	1.3			G2/225
BL (0°-30°)	94.7	1.1	B0/110		
BM (30°-60°)	113.7	1.4	B0/220		
BH (60°-80°)	36.3	0.4	B0/110		G0/110
BVH (80°-90°)	4.3	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 IV Short





REPORT NUMBER: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3
2.5°	842.2	832.6	821.7	821.7	807.9	807.9	799.7	777.9	775.1	762.8	750.4
5°	1075.0	1066.8	1053.1	1040.8	1029.8	1010.6	996.9	970.9	942.2	914.8	890.1
7.5°	1302.3	1298.2	1273.6	1269.4	1251.6	1220.1	1192.8	1154.4	1105.1	1066.8	1021.6
10°	1513.2	1503.6	1498.1	1474.8	1448.8	1414.6	1372.2	1325.6	1268.1	1207.8	1143.5
12.5°	1680.3	1674.8	1650.2	1640.5	1613.2	1578.9	1525.5	1465.3	1407.8	1329.7	1254.4
15°	1804.9	1795.3	1778.9	1763.8	1730.9	1700.8	1651.5	1585.8	1515.9	1431.0	1340.7
17.5°	1909.0	1891.2	1887.0	1863.8	1829.5	1793.9	1739.1	1678.9	1596.7	1511.9	1413.3
20°	2048.7	2024.0	2015.8	1981.6	1941.8	1892.5	1829.5	1754.2	1668.0	1574.8	1473.5
22.5°	2213.0	2195.2	2177.4	2147.3	2096.6	2026.7	1935.0	1852.8	1743.3	1640.5	1531.0
25°	2445.8	2430.8	2402.0	2360.9	2297.9	2214.3	2103.5	1982.9	1854.2	1722.7	1594.0
27.5°	2671.8	2658.0	2637.5	2606.0	2534.8	2443.1	2306.1	2152.8	1989.8	1831.0	1688.5
30°	2884.0	2871.7	2851.2	2819.7	2756.6	2666.3	2511.5	2347.2	2144.5	1959.6	1788.4
32.5°	3112.7	3108.6	3085.3	3040.2	2985.3	2863.5	2695.1	2518.4	2312.9	2099.3	1899.4
35°	3371.5	3340.0	3318.1	3272.9	3179.8	3049.7	2852.5	2659.4	2443.1	2223.9	2000.7
37.5°	3590.7	3560.5	3533.2	3475.6	3362.0	3196.3	2973.0	2760.8	2537.6	2314.3	2087.0
40°	3750.9	3735.8	3702.9	3627.6	3500.3	3303.1	3062.0	2830.6	2606.0	2381.5	2156.8
42.5°	3870.0	3846.7	3809.7	3731.7	3581.0	3356.5	3097.7	2859.4	2637.5	2422.6	2202.1
45°	3913.8	3894.7	3860.4	3775.5	3612.5	3371.5	3096.2	2851.2	2638.9	2434.8	2232.1
47.5°	3887.8	3868.6	3838.5	3759.1	3598.9	3353.7	3071.6	2827.9	2625.2	2439.0	2259.6
50°	3801.5	3790.6	3767.3	3700.2	3556.4	3319.5	3049.7	2815.5	2622.5	2459.5	2297.9
52.5°	3793.3	3786.4	3757.7	3690.6	3544.1	3308.5	3046.9	2822.4	2645.8	2485.5	2325.3
55°	4635.5	4538.3	4320.5	4135.7	3831.7	3470.1	3185.3	2933.3	2744.4	2588.2	2475.9
57.5°	6588.3	6443.1	6157.0	5805.0	5106.6	4420.5	3871.4	3474.2	3278.4	3207.2	3249.6
60°	7503.1	7477.1	7431.9	7264.8	6907.4	6317.2	5659.8	4949.1	4664.3	4639.6	4725.9
62.5°	7937.2	7920.7	7934.5	7913.9	7803.0	7630.5	7441.5	7134.7	6852.6	6670.5	6284.3
65°	8137.1	8148.1	8226.1	8287.8	8301.4	8346.7	8485.0	8867.0	9146.4	8676.7	7604.5
67.5°	7629.1	7693.4	7872.8	8097.4	8360.3	8615.0	9025.8	9831.1	10404.9	9853.0	8330.2
69°	6315.8	6347.3	6785.5	7208.6	7851.0	8300.1	8895.8	9951.6	10596.6	9973.6	8272.7
70°	4972.4	5001.1	5470.8	6046.0	7132.0	7709.8	8489.1	9747.6	10417.3	9813.3	7976.9
72.5°	2243.1	2202.1	2367.7	2675.8	3856.3	4773.8	6136.4	7897.5	8594.5	7861.9	5968.0
75°	1566.6	1548.8	1566.6	1568.0	1751.5	2259.6	2851.2	4280.8	5294.2	4568.4	2851.2
77.5°	1213.4	1201.0	1188.7	1175.0	1196.9	1340.7	1398.2	1518.7	1972.0	1865.2	1087.3
80°	960.0	949.0	979.1	969.6	969.6	986.0	975.1	929.8	845.0	783.3	701.1
82.5°	446.4	449.2	449.2	487.5	587.4	686.0	717.6	672.4	597.1	508.1	409.5
85°	42.4	47.9	80.8	124.6	247.9	279.4	280.7	232.8	232.8	183.5	147.9
87.5°	0.0	1.4	1.4	1.4	12.3	34.2	28.7	8.2	4.1	4.1	6.9
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: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3
2.5°	728.6	724.4	708.0	691.6	676.5	660.0	645.0	630.0	613.5	601.2	586.1
5°	851.8	821.7	787.4	754.6	721.7	687.5	651.8	620.3	587.4	557.4	528.6
7.5°	976.4	917.6	871.0	812.1	758.6	705.3	656.0	605.3	558.7	514.9	473.9
10°	1081.9	1010.6	938.1	862.7	786.1	714.8	646.4	586.1	524.5	471.1	420.4
12.5°	1168.1	1077.7	988.7	894.3	807.9	717.6	632.7	560.1	487.5	427.3	375.3
15°	1246.2	1142.1	1035.3	925.8	816.2	713.5	619.0	528.6	454.6	386.2	327.3
17.5°	1309.2	1190.1	1069.5	946.3	828.5	708.0	601.2	506.7	420.4	349.2	291.6
20°	1364.0	1239.4	1109.2	970.9	836.7	706.6	586.1	479.3	390.2	314.9	258.8
22.5°	1414.6	1290.0	1150.3	1002.4	849.0	705.3	572.5	458.8	364.2	288.9	232.8
25°	1472.1	1340.7	1194.1	1035.3	871.0	710.7	564.2	442.3	340.9	264.3	212.3
27.5°	1536.5	1398.2	1246.2	1076.4	899.7	721.7	561.4	424.6	320.4	241.0	195.8
30°	1626.9	1466.6	1298.2	1117.5	925.8	734.0	558.7	413.5	299.9	223.2	179.4
32.5°	1706.3	1533.7	1355.7	1159.9	954.5	746.4	557.4	398.5	280.7	205.4	167.0
35°	1789.9	1595.4	1405.0	1201.0	979.1	760.0	556.0	387.5	262.9	187.6	154.8
37.5°	1862.4	1647.4	1443.3	1236.6	1006.5	772.4	557.4	378.0	246.5	172.5	143.7
40°	1924.0	1700.8	1485.9	1269.4	1035.3	791.5	558.7	368.4	230.1	158.8	134.2
42.5°	1978.9	1751.5	1531.0	1306.4	1068.2	813.4	566.9	360.2	216.3	146.5	124.6
45°	2021.3	1798.1	1580.3	1358.5	1121.5	849.0	582.0	354.7	202.7	135.5	116.4
47.5°	2065.1	1866.5	1663.8	1440.6	1199.6	905.2	608.0	353.3	191.7	127.3	109.5
50°	2125.3	1935.0	1737.8	1524.1	1270.9	962.7	639.5	354.7	178.1	119.1	102.7
52.5°	2169.2	2004.9	1833.7	1669.3	1440.6	1138.0	761.4	379.3	171.2	112.3	94.4
55°	2428.0	2399.3	2403.3	2430.8	2254.1	1936.3	1273.6	547.8	201.3	127.3	93.1
57.5°	3423.5	3524.9	3583.8	3582.5	3290.7	2729.3	1710.4	703.9	224.6	147.9	110.9
60°	4732.7	4656.0	4547.9	4280.8	3893.2	3115.5	1913.1	757.3	194.5	117.7	101.3
62.5°	5889.9	5440.8	5042.2	4609.4	4101.5	3249.6	1954.2	753.2	169.8	89.0	71.2
65°	6611.6	5803.7	5160.0	4617.7	4019.3	3137.3	1848.7	691.6	143.7	72.6	58.9
67.5°	6784.1	5607.8	4697.1	4005.6	3357.8	2441.7	1357.1	520.4	112.3	60.2	52.0
69°	6407.5	4984.7	3891.9	3107.2	2443.1	1620.0	839.5	328.7	86.2	54.8	47.9
70°	5894.0	4335.6	3170.2	2493.7	1809.0	1138.0	587.4	231.4	69.8	50.7	43.8
72.5°	3791.9	2277.4	1558.4	1084.6	746.4	453.3	230.1	104.1	53.4	42.4	35.6
75°	1470.8	842.2	610.7	464.2	362.9	252.0	139.7	67.1	45.1	35.6	27.4
77.5°	724.4	554.6	453.3	310.9	180.8	112.3	75.3	52.0	36.9	26.0	17.8
80°	572.5	380.7	227.4	141.0	106.8	80.8	57.5	42.4	27.4	16.4	12.3
82.5°	293.1	160.2	117.7	95.9	79.5	63.0	46.6	30.2	17.8	10.9	9.6
85°	91.7	67.1	60.2	58.9	54.8	45.1	32.9	19.1	10.9	6.9	6.9
87.5°	6.9	9.6	12.3	9.6	10.9	9.6	12.3	8.2	5.5	5.5	4.1
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: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3	631.3
2.5°	575.2	558.7	543.7	534.1	516.3	509.4	502.6	499.9	487.5	490.3	479.3
5°	502.6	473.9	451.9	430.0	409.5	394.4	382.0	367.0	354.7	349.2	338.2
7.5°	436.8	399.9	371.1	347.8	323.2	304.0	287.6	276.7	265.6	254.7	249.2
10°	379.3	339.6	306.7	283.4	260.2	243.8	231.4	223.2	216.3	212.3	210.9
12.5°	326.0	287.6	257.4	236.9	219.1	210.9	205.4	201.3	199.9	198.6	198.6
15°	284.9	246.5	223.2	208.1	199.9	195.8	194.5	191.7	189.0	187.6	187.6
17.5°	246.5	217.7	201.3	193.0	189.0	186.3	183.5	180.8	178.1	176.6	176.6
20°	220.5	197.2	189.0	183.5	179.4	176.6	172.5	169.8	168.4	167.0	165.7
22.5°	199.9	184.8	179.4	175.3	169.8	165.7	163.0	160.2	157.5	156.1	154.8
25°	184.8	175.3	171.2	165.7	160.2	156.1	152.0	147.9	145.2	143.7	141.0
27.5°	173.9	167.0	161.6	154.8	149.3	145.2	141.0	137.0	134.2	131.5	130.1
30°	164.3	157.5	150.6	145.2	138.3	134.2	128.8	124.6	123.2	120.5	117.7
32.5°	154.8	147.9	141.0	134.2	127.3	121.9	119.1	113.7	110.9	109.5	106.8
35°	143.7	137.0	128.8	123.2	116.4	110.9	106.8	102.7	100.0	97.2	95.9
37.5°	134.2	126.0	117.7	110.9	105.5	100.0	95.9	91.7	89.0	86.2	84.9
40°	123.2	115.0	106.8	100.0	94.4	90.4	86.2	82.2	79.5	78.0	78.0
42.5°	113.7	104.1	95.9	90.4	86.2	80.8	76.7	72.6	71.2	69.8	71.2
45°	104.1	94.4	87.7	82.2	78.0	72.6	68.4	65.7	64.4	65.7	67.1
47.5°	95.9	86.2	79.5	75.3	71.2	67.1	63.0	60.2	60.2	63.0	65.7
50°	87.7	78.0	72.6	69.8	65.7	61.6	56.2	54.8	56.2	58.9	61.6
52.5°	79.5	68.4	64.4	63.0	58.9	54.8	50.7	49.3	50.7	53.4	52.0
55°	71.2	60.2	58.9	57.5	53.4	47.9	43.8	43.8	43.8	42.4	39.7
57.5°	68.4	53.4	52.0	50.7	46.6	41.1	38.4	35.6	34.2	30.2	28.7
60°	71.2	47.9	47.9	45.1	41.1	35.6	31.5	27.4	24.6	21.9	21.9
62.5°	57.5	43.8	42.4	39.7	34.2	28.7	24.6	20.5	19.1	17.8	17.8
65°	46.6	39.7	36.9	32.9	28.7	23.3	19.1	16.4	15.1	15.1	16.4
67.5°	42.4	35.6	31.5	27.4	23.3	17.8	15.1	13.7	13.7	15.1	15.1
69°	39.7	32.9	28.7	24.6	20.5	16.4	13.7	13.7	13.7	13.7	15.1
70°	36.9	31.5	27.4	23.3	17.8	13.7	12.3	12.3	13.7	13.7	15.1
72.5°	28.7	24.6	23.3	19.1	13.7	12.3	10.9	12.3	12.3	13.7	13.7
75°	21.9	17.8	17.8	15.1	10.9	9.6	9.6	10.9	10.9	12.3	12.3
77.5°	15.1	12.3	12.3	10.9	9.6	8.2	8.2	9.6	10.9	10.9	12.3
80°	10.9	9.6	8.2	9.6	8.2	6.9	8.2	9.6	9.6	10.9	10.9
82.5°	8.2	8.2	8.2	8.2	6.9	6.9	8.2	8.2	9.6	10.9	10.9
85°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	8.2	8.2	9.6	9.6
87.5°	4.1	4.1	4.1	5.5	5.5	6.9	6.9	6.9	6.9	8.2	8.2
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: P163833

CATALOG NUMBER: LDRL-SL4-F05-E-7050-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	631.3	631.3	631.3	631.3
2.5°	476.6	475.2	469.7	471.1
5°	334.2	326.0	331.4	330.0
7.5°	245.1	243.8	242.3	245.1
10°	209.5	209.5	208.1	209.5
12.5°	197.2	197.2	197.2	197.2
15°	187.6	187.6	186.3	186.3
17.5°	176.6	176.6	176.6	175.3
20°	165.7	164.3	164.3	164.3
22.5°	153.4	152.0	152.0	152.0
25°	141.0	139.7	139.7	139.7
27.5°	128.8	127.3	126.0	126.0
30°	116.4	115.0	113.7	113.7
32.5°	104.1	102.7	101.3	101.3
35°	93.1	93.1	91.7	90.4
37.5°	83.5	83.5	83.5	83.5
40°	76.7	78.0	78.0	78.0
42.5°	72.6	73.9	75.3	76.7
45°	69.8	72.6	73.9	73.9
47.5°	68.4	69.8	71.2	71.2
50°	63.0	61.6	61.6	61.6
52.5°	50.7	47.9	46.6	45.1
55°	36.9	35.6	32.9	32.9
57.5°	26.0	26.0	24.6	24.6
60°	20.5	20.5	19.1	20.5
62.5°	17.8	17.8	17.8	17.8
65°	16.4	16.4	16.4	16.4
67.5°	16.4	16.4	16.4	16.4
69°	15.1	15.1	15.1	15.1
70°	15.1	15.1	15.1	15.1
72.5°	13.7	13.7	13.7	13.7
75°	12.3	13.7	13.7	13.7
77.5°	12.3	12.3	12.3	12.3
80°	10.9	10.9	12.3	12.3
82.5°	10.9	10.9	10.9	10.9
85°	9.6	9.6	10.9	10.9
87.5°	8.2	8.2	9.6	9.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)