

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: P163790

Luminaire Tested: **LDRL-SL4-F01-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163790
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-F01-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (7) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1375.2 lumens
Efficiency: N/A
Efficacy: 53.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

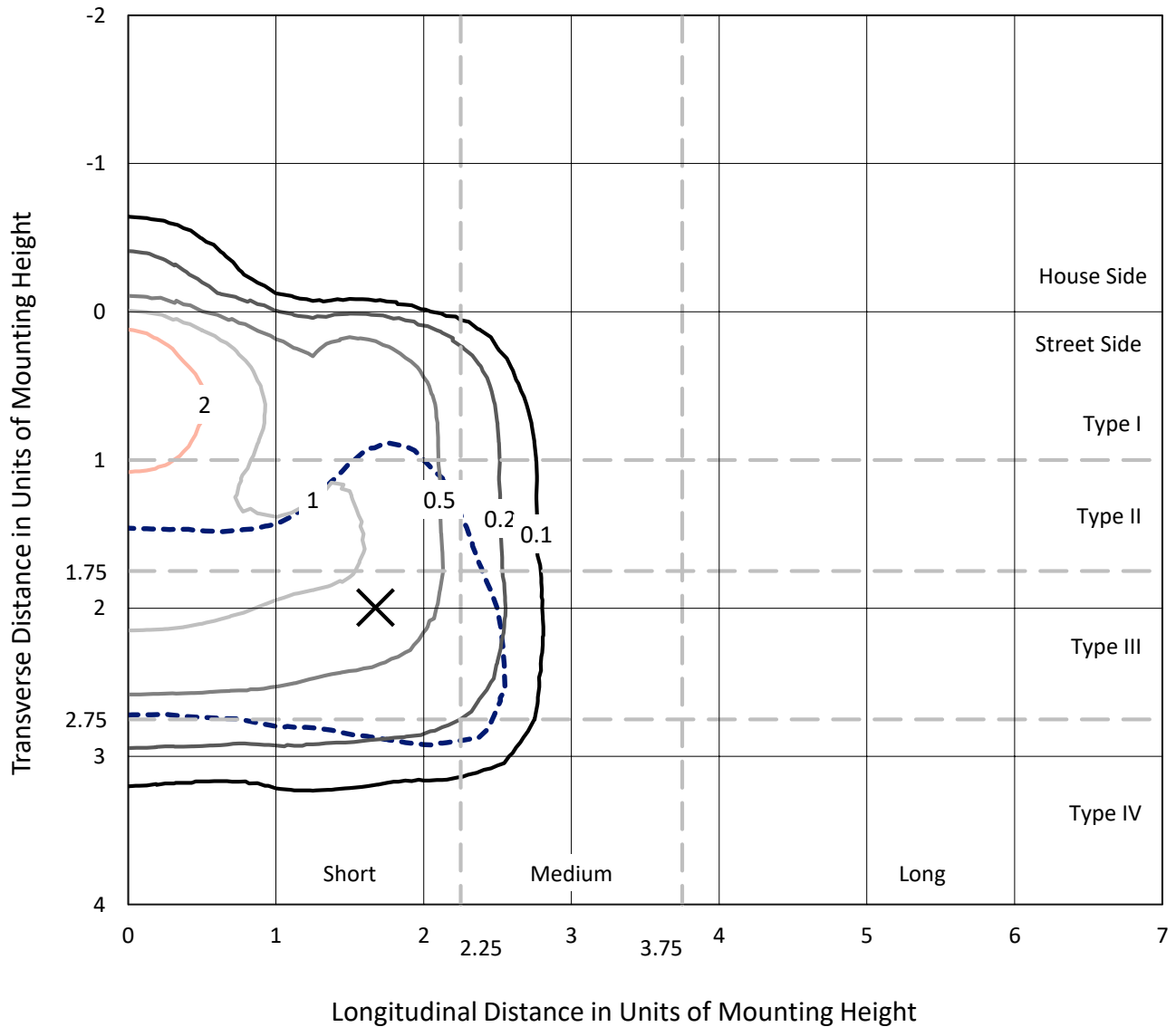
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P163790
 CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

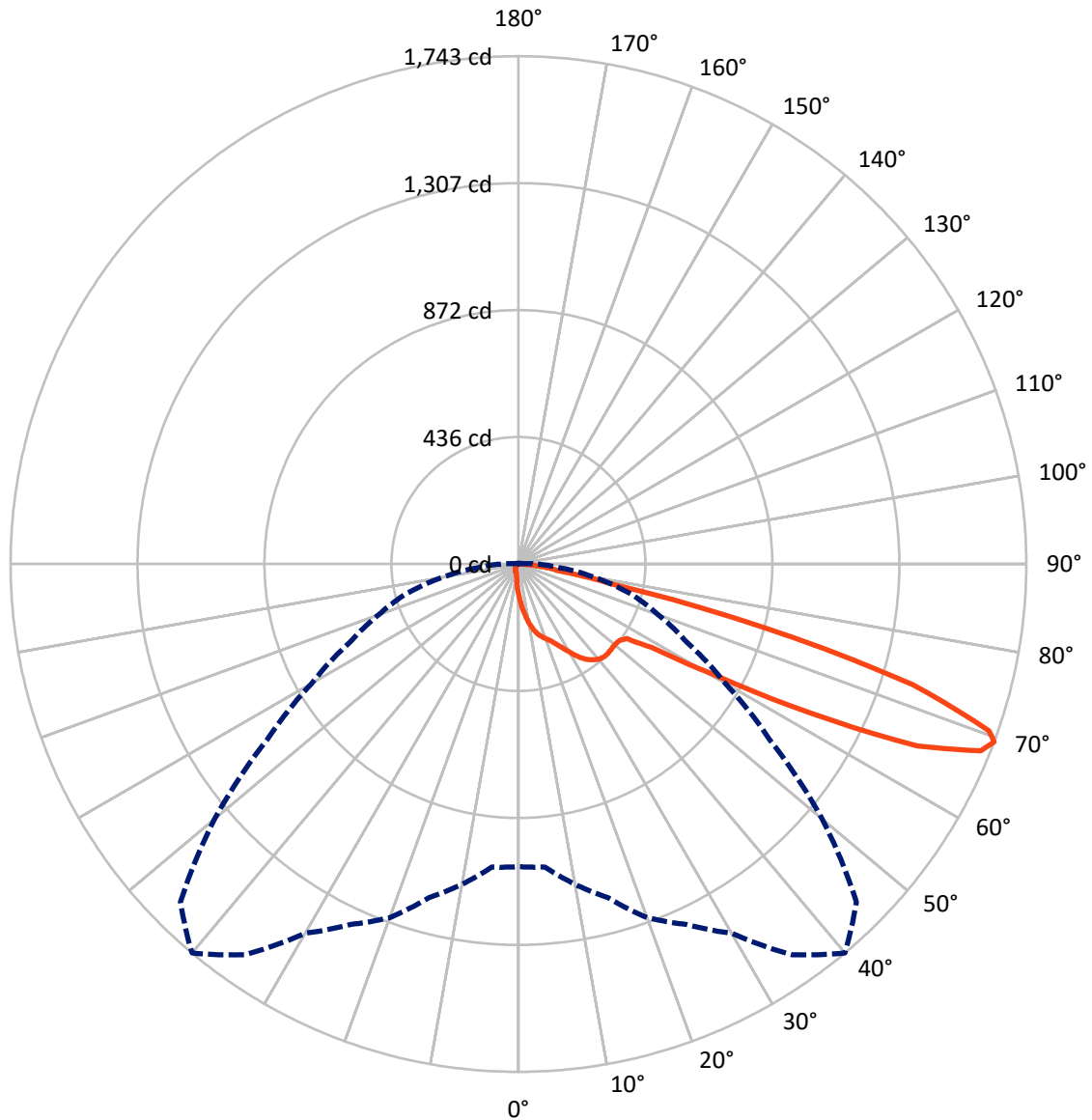


Based on 10 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

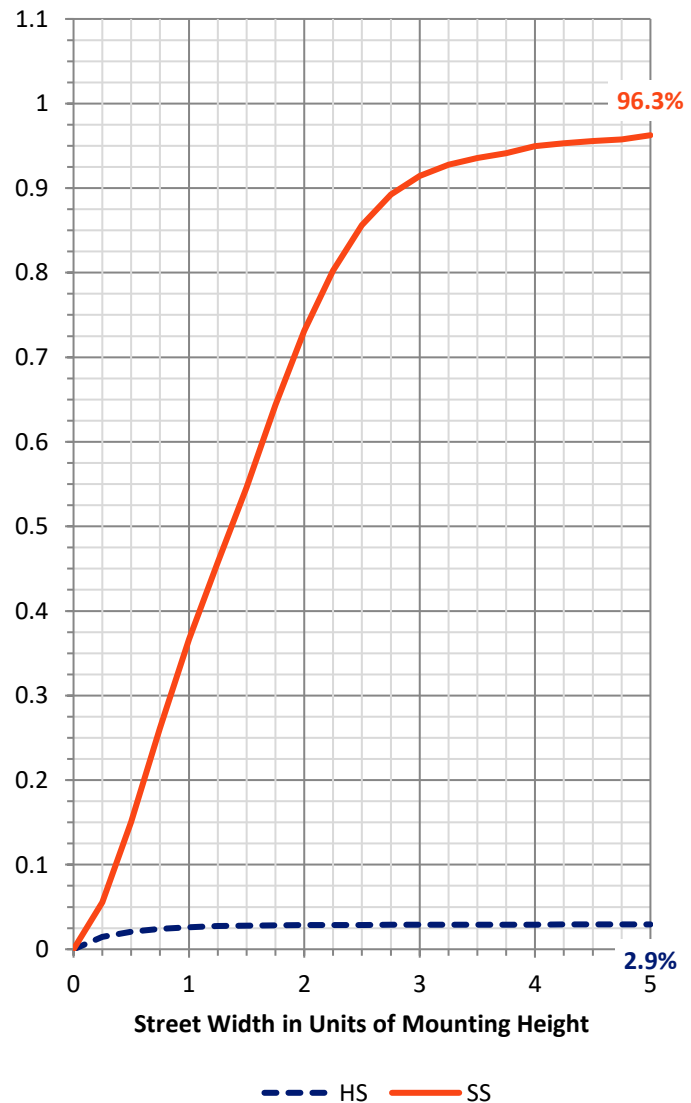
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	41.0	0.0	41.0
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	1334.2	0.0	1334.2
	% Fixture	97.0	0.0	97.0
Total	Lumens	1375.2	0.0	1375.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.7	0.8
10°-20°	36.8	2.7
20°-30°	70.4	5.1
30°-40°	117.1	8.5
40°-50°	158.5	11.5
50°-60°	247.9	18.0
60°-70°	509.7	37.1
70°-80°	205.1	14.9
80°-90°	19.0	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°	1375.2	100.0
0°-180°	1375.2	100.0



REPORT NUMBER: P163790

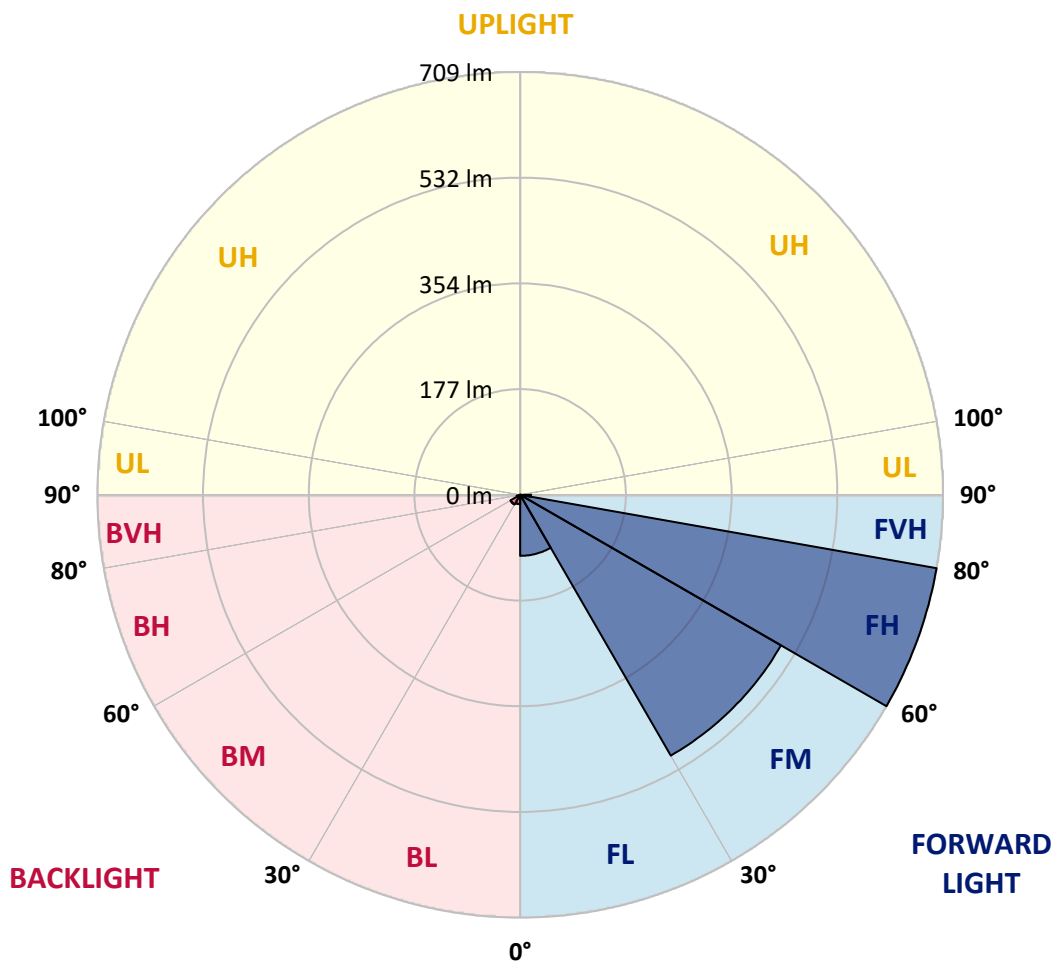
CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	102.3	7.4			
FM	(30°-60°)	504.8	36.7			
FH	(60°-80°)	708.8	51.5			G1/1800
FVH	(80°-90°)	18.3	1.3			G1/100
BL	(0°-30°)	15.6	1.1	B0/110		
BM	(30°-60°)	18.7	1.4	B0/220		
BH	(60°-80°)	6.0	0.4	B0/110		G0/110
BVH	(80°-90°)	0.7	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 IV Short





REPORT NUMBER: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9
2.5°	138.5	137.0	135.2	135.2	132.9	132.9	131.6	128.0	127.5	125.5	123.4
5°	176.8	175.5	173.2	171.2	169.4	166.3	164.0	159.7	155.0	150.5	146.4
7.5°	214.2	213.6	209.5	208.8	205.9	200.7	196.2	189.9	181.8	175.5	168.1
10°	248.9	247.4	246.4	242.6	238.3	232.7	225.7	218.1	208.6	198.7	188.1
12.5°	276.4	275.5	271.5	269.9	265.4	259.7	251.0	241.0	231.6	218.7	206.4
15°	296.9	295.3	292.6	290.1	284.7	279.8	271.7	260.9	249.4	235.4	220.5
17.5°	314.0	311.1	310.4	306.6	301.0	295.1	286.1	276.2	262.7	248.7	232.5
20°	337.0	333.0	331.6	326.0	319.4	311.3	301.0	288.6	274.4	259.1	242.4
22.5°	364.0	361.1	358.2	353.2	344.9	333.4	318.3	304.8	286.8	269.9	251.9
25°	402.3	399.9	395.1	388.4	378.0	364.3	346.0	326.2	305.0	283.4	262.2
27.5°	439.5	437.3	433.9	428.7	417.0	401.9	379.4	354.1	327.3	301.2	277.8
30°	474.4	472.4	469.0	463.8	453.5	438.6	413.2	386.1	352.8	322.4	294.2
32.5°	512.0	511.4	507.5	500.1	491.1	471.0	443.3	414.3	380.5	345.3	312.5
35°	554.6	549.4	545.8	538.4	523.1	501.7	469.3	437.5	401.9	365.8	329.1
37.5°	590.7	585.7	581.2	571.8	553.1	525.8	489.1	454.2	417.4	380.7	343.3
40°	617.0	614.5	609.1	596.8	575.8	543.4	503.7	465.6	428.7	391.8	354.8
42.5°	636.6	632.8	626.7	613.9	589.1	552.1	509.6	470.4	433.9	398.5	362.2
45°	643.8	640.7	635.0	621.1	594.3	554.6	509.3	469.0	434.1	400.5	367.2
47.5°	639.6	636.4	631.5	618.4	592.0	551.7	505.3	465.2	431.9	401.2	371.7
50°	625.4	623.6	619.7	608.7	585.0	546.1	501.7	463.2	431.4	404.6	378.0
52.5°	624.0	622.9	618.2	607.1	583.0	544.3	501.2	464.3	435.2	408.9	382.5
55°	762.6	746.6	710.7	680.3	630.3	570.8	524.0	482.5	451.5	425.8	407.3
57.5°	1083.8	1059.9	1012.8	954.9	840.1	727.2	636.9	571.5	539.3	527.6	534.6
60°	1234.3	1230.0	1222.6	1195.1	1136.3	1039.2	931.1	814.1	767.3	763.2	777.4
62.5°	1305.7	1303.0	1305.3	1301.9	1283.6	1255.2	1224.2	1173.7	1127.3	1097.3	1033.8
65°	1338.6	1340.4	1353.2	1363.4	1365.6	1373.1	1395.8	1458.7	1504.6	1427.3	1251.0
67.5°	1255.0	1265.6	1295.1	1332.1	1375.3	1417.2	1484.8	1617.2	1711.6	1620.9	1370.4
69°	1039.0	1044.2	1116.2	1185.8	1291.5	1365.4	1463.4	1637.1	1743.2	1640.7	1360.9
70°	818.0	822.7	900.0	994.6	1173.2	1268.3	1396.5	1603.5	1713.7	1614.3	1312.2
72.5°	369.0	362.2	389.5	440.2	634.4	785.3	1009.5	1299.2	1413.8	1293.3	981.8
75°	257.7	254.8	257.7	257.9	288.1	371.7	469.0	704.2	870.9	751.5	469.0
77.5°	199.6	197.6	195.5	193.3	196.9	220.5	230.0	249.8	324.4	306.8	178.9
80°	157.9	156.1	161.1	159.5	159.5	162.2	160.4	153.0	139.0	128.9	115.3
82.5°	73.4	73.9	73.9	80.2	96.6	112.9	118.0	110.6	98.2	83.6	67.4
85°	7.0	7.9	13.3	20.5	40.8	46.0	46.2	38.3	38.3	30.2	24.3
87.5°	0.0	0.2	0.2	0.2	2.0	5.6	4.7	1.4	0.7	0.7	1.1
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: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9
2.5°	119.9	119.2	116.5	113.8	111.3	108.6	106.1	103.6	100.9	98.9	96.4
5°	140.1	135.2	129.5	124.1	118.7	113.1	107.2	102.0	96.6	91.7	87.0
7.5°	160.6	150.9	143.3	133.6	124.8	116.0	107.9	99.6	91.9	84.7	78.0
10°	178.0	166.3	154.3	141.9	129.3	117.6	106.3	96.4	86.3	77.5	69.2
12.5°	192.2	177.3	162.6	147.1	132.9	118.0	104.1	92.1	80.2	70.3	61.7
15°	205.0	187.9	170.3	152.3	134.3	117.4	101.8	87.0	74.8	63.5	53.8
17.5°	215.4	195.8	175.9	155.7	136.3	116.5	98.9	83.4	69.2	57.4	48.0
20°	224.4	203.9	182.5	159.7	137.6	116.2	96.4	78.8	64.2	51.8	42.6
22.5°	232.7	212.2	189.2	164.9	139.7	116.0	94.2	75.5	59.9	47.5	38.3
25°	242.2	220.5	196.4	170.3	143.3	116.9	92.8	72.8	56.1	43.5	34.9
27.5°	252.8	230.0	205.0	177.1	148.0	118.7	92.4	69.8	52.7	39.6	32.2
30°	267.6	241.3	213.6	183.8	152.3	120.7	91.9	68.0	49.3	36.7	29.5
32.5°	280.7	252.3	223.0	190.8	157.0	122.8	91.7	65.5	46.2	33.8	27.5
35°	294.4	262.4	231.1	197.6	161.1	125.0	91.5	63.8	43.3	30.9	25.5
37.5°	306.4	271.0	237.4	203.4	165.6	127.1	91.7	62.2	40.6	28.4	23.6
40°	316.5	279.8	244.4	208.8	170.3	130.2	91.9	60.6	37.8	26.1	22.1
42.5°	325.5	288.1	251.9	214.9	175.7	133.8	93.3	59.3	35.6	24.1	20.5
45°	332.5	295.8	260.0	223.5	184.5	139.7	95.7	58.3	33.3	22.3	19.1
47.5°	339.7	307.1	273.7	237.0	197.3	148.9	100.0	58.1	31.5	20.9	18.0
50°	349.6	318.3	285.9	250.7	209.1	158.4	105.2	58.3	29.3	19.6	16.9
52.5°	356.8	329.8	301.6	274.6	237.0	187.2	125.3	62.4	28.2	18.5	15.5
55°	399.4	394.7	395.4	399.9	370.8	318.5	209.5	90.1	33.1	20.9	15.3
57.5°	563.2	579.9	589.5	589.3	541.3	449.0	281.4	115.8	36.9	24.3	18.2
60°	778.5	765.9	748.1	704.2	640.5	512.5	314.7	124.6	32.0	19.4	16.7
62.5°	968.9	895.0	829.5	758.3	674.7	534.6	321.5	123.9	27.9	14.6	11.7
65°	1087.6	954.7	848.8	759.6	661.2	516.1	304.1	113.8	23.6	11.9	9.7
67.5°	1116.0	922.5	772.7	658.9	552.4	401.7	223.2	85.6	18.5	9.9	8.6
69°	1054.1	820.0	640.2	511.2	401.9	266.5	138.1	54.1	14.2	9.0	7.9
70°	969.6	713.2	521.5	410.2	297.6	187.2	96.6	38.1	11.5	8.3	7.2
72.5°	623.8	374.6	256.4	178.4	122.8	74.6	37.8	17.1	8.8	7.0	5.9
75°	241.9	138.5	100.5	76.4	59.7	41.5	23.0	11.0	7.4	5.9	4.5
77.5°	119.2	91.2	74.6	51.1	29.7	18.5	12.4	8.6	6.1	4.3	2.9
80°	94.2	62.6	37.4	23.2	17.6	13.3	9.5	7.0	4.5	2.7	2.0
82.5°	48.2	26.4	19.4	15.8	13.1	10.4	7.7	5.0	2.9	1.8	1.6
85°	15.1	11.0	9.9	9.7	9.0	7.4	5.4	3.1	1.8	1.1	1.1
87.5°	1.1	1.6	2.0	1.6	1.8	1.6	2.0	1.4	0.9	0.9	0.7
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: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9
2.5°	94.6	91.9	89.4	87.9	84.9	83.8	82.7	82.2	80.2	80.7	78.8
5°	82.7	78.0	74.3	70.7	67.4	64.9	62.8	60.4	58.3	57.4	55.6
7.5°	71.9	65.8	61.0	57.2	53.2	50.0	47.3	45.5	43.7	41.9	41.0
10°	62.4	55.9	50.5	46.6	42.8	40.1	38.1	36.7	35.6	34.9	34.7
12.5°	53.6	47.3	42.3	39.0	36.0	34.7	33.8	33.1	32.9	32.7	32.7
15°	46.9	40.6	36.7	34.2	32.9	32.2	32.0	31.5	31.1	30.9	30.9
17.5°	40.6	35.8	33.1	31.8	31.1	30.6	30.2	29.7	29.3	29.1	29.1
20°	36.3	32.4	31.1	30.2	29.5	29.1	28.4	27.9	27.7	27.5	27.3
22.5°	32.9	30.4	29.5	28.8	27.9	27.3	26.8	26.4	25.9	25.7	25.5
25°	30.4	28.8	28.2	27.3	26.4	25.7	25.0	24.3	23.9	23.6	23.2
27.5°	28.6	27.5	26.6	25.5	24.6	23.9	23.2	22.5	22.1	21.6	21.4
30°	27.0	25.9	24.8	23.9	22.8	22.1	21.2	20.5	20.3	19.8	19.4
32.5°	25.5	24.3	23.2	22.1	20.9	20.1	19.6	18.7	18.2	18.0	17.6
35°	23.6	22.5	21.2	20.3	19.1	18.2	17.6	16.9	16.4	16.0	15.8
37.5°	22.1	20.7	19.4	18.2	17.3	16.4	15.8	15.1	14.6	14.2	14.0
40°	20.3	18.9	17.6	16.4	15.5	14.9	14.2	13.5	13.1	12.8	12.8
42.5°	18.7	17.1	15.8	14.9	14.2	13.3	12.6	11.9	11.7	11.5	11.7
45°	17.1	15.5	14.4	13.5	12.8	11.9	11.3	10.8	10.6	10.8	11.0
47.5°	15.8	14.2	13.1	12.4	11.7	11.0	10.4	9.9	9.9	10.4	10.8
50°	14.4	12.8	11.9	11.5	10.8	10.1	9.2	9.0	9.2	9.7	10.1
52.5°	13.1	11.3	10.6	10.4	9.7	9.0	8.3	8.1	8.3	8.8	8.6
55°	11.7	9.9	9.7	9.5	8.8	7.9	7.2	7.2	7.2	7.0	6.5
57.5°	11.3	8.8	8.6	8.3	7.7	6.8	6.3	5.9	5.6	5.0	4.7
60°	11.7	7.9	7.9	7.4	6.8	5.9	5.2	4.5	4.1	3.6	3.6
62.5°	9.5	7.2	7.0	6.5	5.6	4.7	4.1	3.4	3.1	2.9	2.9
65°	7.7	6.5	6.1	5.4	4.7	3.8	3.1	2.7	2.5	2.5	2.7
67.5°	7.0	5.9	5.2	4.5	3.8	2.9	2.5	2.3	2.3	2.5	2.5
69°	6.5	5.4	4.7	4.1	3.4	2.7	2.3	2.3	2.3	2.3	2.5
70°	6.1	5.2	4.5	3.8	2.9	2.3	2.0	2.0	2.3	2.3	2.5
72.5°	4.7	4.1	3.8	3.1	2.3	2.0	1.8	2.0	2.0	2.3	2.3
75°	3.6	2.9	2.9	2.5	1.8	1.6	1.6	1.8	1.8	2.0	2.0
77.5°	2.5	2.0	2.0	1.8	1.6	1.4	1.4	1.6	1.8	1.8	2.0
80°	1.8	1.6	1.4	1.6	1.4	1.1	1.4	1.6	1.6	1.8	1.8
82.5°	1.4	1.4	1.4	1.4	1.1	1.1	1.4	1.4	1.6	1.8	1.8
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.4	1.4	1.6	1.6
87.5°	0.7	0.7	0.7	0.9	0.9	1.1	1.1	1.1	1.1	1.4	1.4
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: P163790

CATALOG NUMBER: LDRL-SL4-F01-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	103.9	103.9	103.9	103.9
2.5°	78.4	78.2	77.3	77.5
5°	55.0	53.6	54.5	54.3
7.5°	40.3	40.1	39.9	40.3
10°	34.5	34.5	34.2	34.5
12.5°	32.4	32.4	32.4	32.4
15°	30.9	30.9	30.6	30.6
17.5°	29.1	29.1	29.1	28.8
20°	27.3	27.0	27.0	27.0
22.5°	25.2	25.0	25.0	25.0
25°	23.2	23.0	23.0	23.0
27.5°	21.2	20.9	20.7	20.7
30°	19.1	18.9	18.7	18.7
32.5°	17.1	16.9	16.7	16.7
35°	15.3	15.3	15.1	14.9
37.5°	13.7	13.7	13.7	13.7
40°	12.6	12.8	12.8	12.8
42.5°	11.9	12.2	12.4	12.6
45°	11.5	11.9	12.2	12.2
47.5°	11.3	11.5	11.7	11.7
50°	10.4	10.1	10.1	10.1
52.5°	8.3	7.9	7.7	7.4
55°	6.1	5.9	5.4	5.4
57.5°	4.3	4.3	4.1	4.1
60°	3.4	3.4	3.1	3.4
62.5°	2.9	2.9	2.9	2.9
65°	2.7	2.7	2.7	2.7
67.5°	2.7	2.7	2.7	2.7
69°	2.5	2.5	2.5	2.5
70°	2.5	2.5	2.5	2.5
72.5°	2.3	2.3	2.3	2.3
75°	2.0	2.3	2.3	2.3
77.5°	2.0	2.0	2.0	2.0
80°	1.8	1.8	2.0	2.0
82.5°	1.8	1.8	1.8	1.8
85°	1.6	1.6	1.8	1.8
87.5°	1.4	1.4	1.6	1.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)