

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: P145423

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145423
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33703)
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
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (7) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2008 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

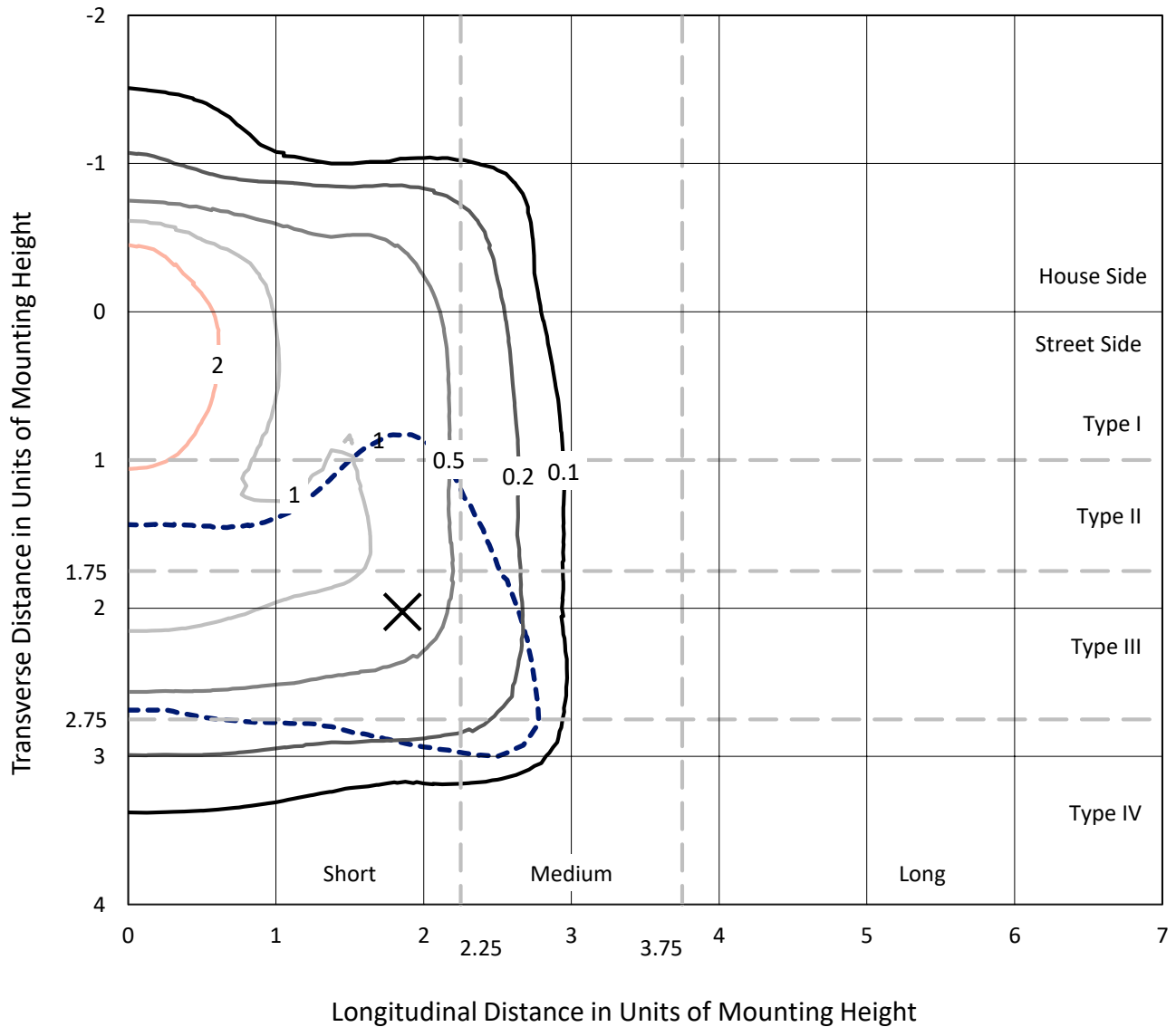
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P145423
 CATALOG NUMBER: LDRL-SL4-F01-E-8030

Iso-Footcandle Lines of Horizontal Illumination

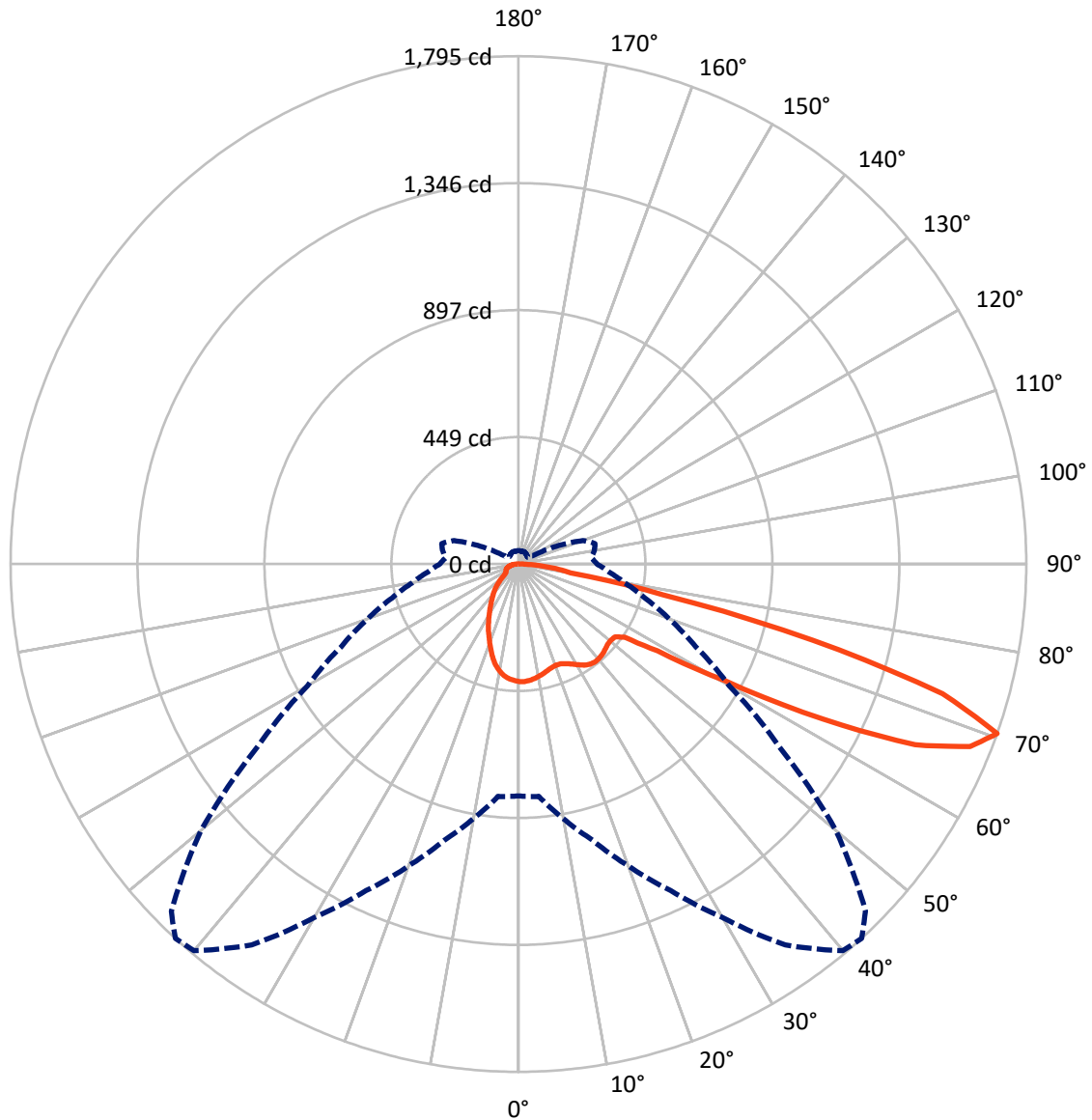
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P145423
CATALOG NUMBER: LDRL-SL4-F01-E-8030

Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P145423

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

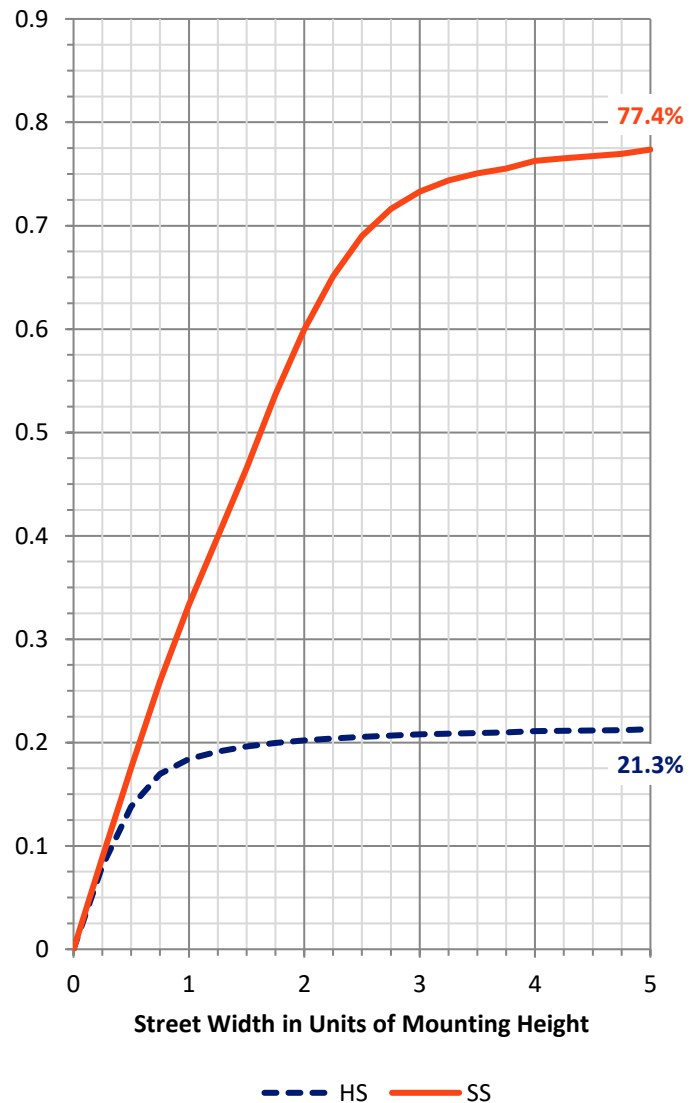
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	433.8	0.0	433.8
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	1574.2	0.0	1574.2
	% Fixture	78.4	0.0	78.4
Total	Lumens	2008.0	0.0	2008.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.6	1.9
10°-20°	104.1	5.2
20°-30°	151.8	7.6
30°-40°	193.6	9.6
40°-50°	226.0	11.3
50°-60°	345.6	17.2
60°-70°	626.5	31.2
70°-80°	278.6	13.9
80°-90°	43.1	2.1
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°	2008.0	100.0
0°-180°	2008.0	100.0



REPORT NUMBER: P145423

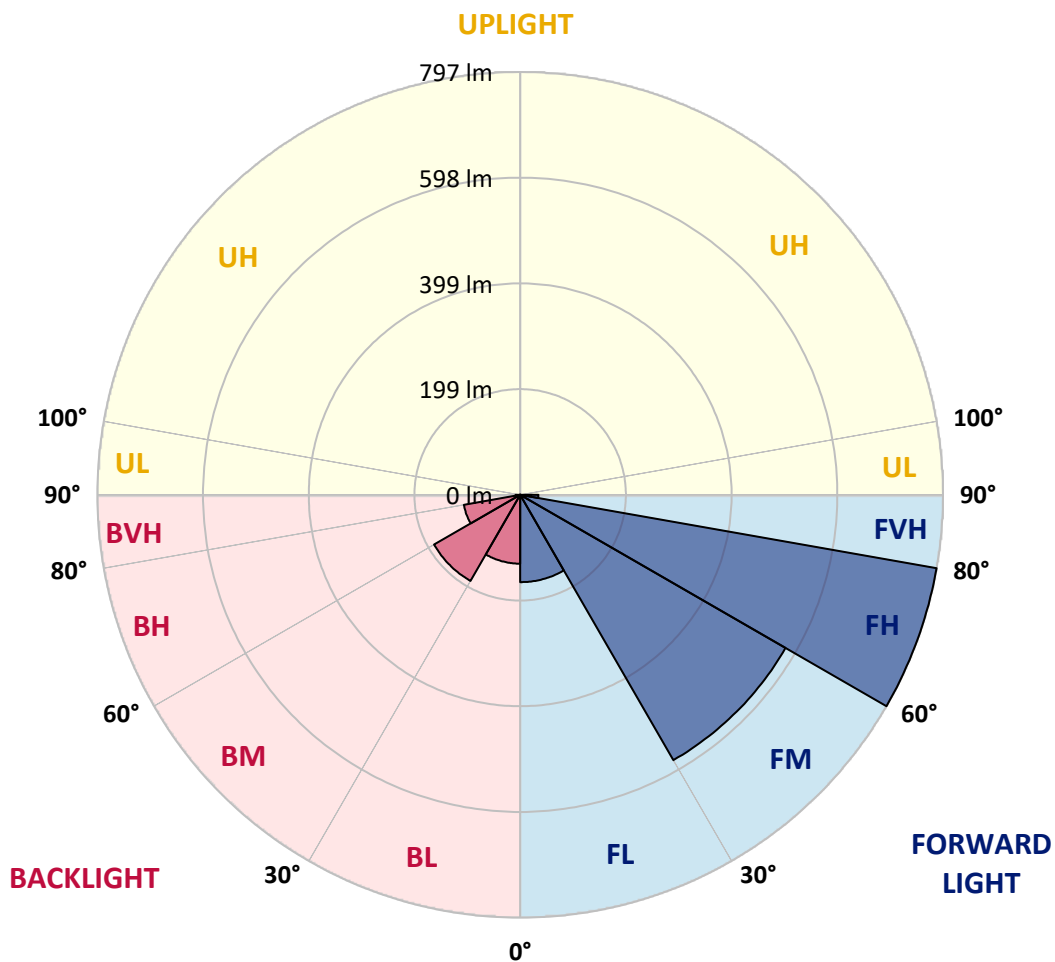
CATALOG NUMBER: LDRL-SL4-F01-E-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	164.7	8.2			
FM	(30°-60°)	577.8	28.8			
FH	(60°-80°)	797.3	39.7			G1/1800
FVH	(80°-90°)	34.4	1.7			G1/100
BL	(0°-30°)	129.8	6.5	B1/500		
BM	(30°-60°)	187.5	9.3	B0/220		
BH	(60°-80°)	107.8	5.4	B0/110		G0/110
BVH	(80°-90°)	8.7	0.4			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





REPORT NUMBER: P145423
 CATALOG NUMBER: LDRL-SL4-F01-E-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3
2.5°	417.2	416.8	417.1	417.3	417.3	417.5	416.2	416.4	415.8	416.0	416.1
5°	415.7	415.3	415.5	415.5	415.5	415.4	413.7	413.6	412.9	412.9	412.6
7.5°	412.7	411.2	412.0	412.2	411.9	411.2	410.2	409.3	408.8	408.8	407.9
10°	408.3	406.6	407.0	407.3	407.2	405.8	405.4	404.4	403.3	402.9	401.7
12.5°	402.6	401.5	402.0	401.9	401.9	400.6	399.9	398.5	397.1	396.4	395.0
15°	399.0	397.6	398.1	398.1	397.6	396.3	395.3	392.8	390.5	389.6	387.8
17.5°	401.2	399.8	400.3	399.9	399.0	396.3	393.8	389.8	386.0	383.8	381.4
20°	410.1	408.7	409.1	408.8	407.5	403.1	398.5	391.6	384.6	381.3	377.6
22.5°	424.3	423.2	423.9	423.5	421.2	415.7	408.8	398.8	388.4	383.3	378.2
25°	445.4	445.1	446.2	444.9	441.7	433.4	423.5	410.0	396.3	390.0	382.8
27.5°	470.7	468.3	470.0	468.9	466.7	456.1	442.7	425.6	408.1	399.9	391.3
30°	493.6	491.5	494.5	494.0	490.6	479.8	462.9	442.8	423.2	412.7	402.9
32.5°	520.0	517.4	519.8	519.8	514.7	500.1	480.9	457.9	437.3	426.1	414.3
35°	547.8	545.0	547.2	546.5	537.6	518.2	494.1	469.2	446.5	435.0	422.9
37.5°	573.6	573.1	573.7	569.1	556.7	531.9	503.0	475.2	451.1	439.1	426.4
40°	599.3	598.4	596.0	587.9	569.8	540.0	507.6	477.3	451.3	438.8	426.0
42.5°	615.5	613.7	609.6	598.6	575.9	541.9	506.2	474.1	448.0	435.2	422.6
45°	621.1	619.3	614.4	602.0	576.1	538.9	500.8	467.6	441.7	430.0	417.3
47.5°	616.5	615.4	610.9	598.5	571.6	533.1	494.0	461.2	435.7	424.3	412.5
50°	608.7	608.0	604.1	592.6	567.4	529.7	490.8	458.2	434.1	423.5	412.3
52.5°	628.2	626.1	619.1	605.6	576.2	535.9	495.8	462.8	438.0	427.2	415.8
55°	868.0	852.5	818.0	753.2	662.5	592.1	532.9	493.0	466.3	455.8	444.9
57.5°	1141.5	1125.4	1111.0	1061.5	953.8	820.9	701.3	631.4	583.4	578.8	574.5
60°	1246.9	1252.0	1250.8	1232.4	1177.2	1114.1	1014.0	931.4	839.8	836.1	841.5
62.5°	1319.5	1323.8	1324.4	1318.8	1300.8	1279.8	1258.9	1232.4	1215.0	1207.4	1158.8
65°	1349.4	1355.7	1369.5	1379.8	1382.7	1390.0	1408.9	1481.0	1541.0	1540.6	1483.6
67.5°	1235.0	1242.6	1294.8	1346.1	1389.2	1439.0	1515.8	1633.0	1723.4	1720.7	1674.0
70°	819.6	824.4	913.1	1009.7	1135.0	1273.5	1441.3	1643.3	1783.5	1794.5	1734.3
72.5°	502.8	513.6	542.6	581.8	648.7	777.0	1026.4	1371.7	1577.4	1567.1	1519.2
75°	339.4	340.0	339.2	343.4	347.1	373.0	473.5	754.3	1068.5	1074.1	1053.5
77.5°	232.0	235.1	236.8	235.6	239.4	238.3	244.1	258.5	409.5	522.7	480.3
80°	202.8	204.0	205.8	203.2	196.2	192.3	197.7	192.6	181.4	187.4	179.5
82.5°	128.3	132.1	132.5	141.7	155.4	155.9	162.9	157.7	143.5	134.2	122.8
85°	92.2	93.6	96.1	96.7	92.0	87.9	90.4	86.1	77.6	72.6	64.2
87.5°	53.8	55.2	57.7	56.2	51.4	45.6	41.1	35.4	28.0	26.2	23.1
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: P145423

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3
2.5°	416.2	415.5	415.0	414.7	415.3	414.7	414.1	413.9	413.3	413.4	412.7
5°	412.3	411.4	410.5	409.8	410.4	409.4	408.6	408.0	407.3	407.2	406.5
7.5°	406.9	405.4	404.2	403.0	401.6	400.8	399.8	398.8	397.3	397.1	396.9
10°	399.8	398.5	396.3	394.4	392.4	390.3	388.2	386.7	384.9	384.2	383.2
12.5°	392.7	390.2	387.5	384.5	382.1	378.7	376.0	373.0	370.4	368.7	366.9
15°	384.3	381.7	377.9	375.0	371.6	367.9	364.3	359.9	355.6	353.0	350.5
17.5°	377.1	373.7	370.7	366.5	363.1	358.8	353.4	348.8	343.6	339.3	334.7
20°	371.5	367.7	364.1	360.4	356.3	351.4	345.4	338.9	332.3	326.2	319.4
22.5°	369.3	363.3	359.2	355.8	351.6	346.0	339.3	331.2	323.1	315.3	307.4
25°	371.2	362.3	356.0	352.1	348.4	342.7	335.1	325.9	316.5	306.6	297.1
27.5°	376.5	365.2	356.3	350.2	345.9	340.3	331.9	322.3	311.6	300.4	290.3
30°	384.2	370.1	359.0	350.2	343.8	337.4	328.3	317.4	306.1	294.4	283.0
32.5°	392.5	375.5	362.2	350.6	340.7	332.6	323.1	312.6	300.6	288.2	275.9
35°	398.8	379.4	363.6	349.1	336.4	326.2	316.0	305.7	294.0	281.5	269.2
37.5°	401.5	381.0	363.3	345.9	330.4	319.2	308.7	298.3	287.1	275.2	263.9
40°	401.6	381.0	361.6	341.5	324.1	312.0	300.9	291.2	280.6	270.5	260.4
42.5°	399.0	379.0	358.5	337.5	319.5	305.9	294.4	284.5	276.0	267.0	258.5
45°	394.2	375.1	355.8	335.3	317.9	304.3	292.1	282.7	275.1	267.0	259.6
47.5°	390.6	372.9	355.9	338.5	321.9	308.0	294.7	284.8	278.3	271.9	266.6
50°	391.3	373.7	357.6	341.0	324.7	310.6	297.8	289.3	285.4	283.3	282.0
52.5°	394.9	377.1	364.8	353.8	348.5	339.9	332.8	326.4	327.3	322.3	315.9
55°	432.3	426.3	440.3	450.5	455.5	464.3	477.0	464.9	463.2	447.7	401.7
57.5°	580.4	594.6	616.2	631.5	633.1	630.4	620.0	609.9	593.6	570.3	506.0
60°	828.8	825.5	805.4	778.5	757.6	730.2	702.6	679.3	653.1	617.4	548.9
62.5°	1090.1	1009.6	938.1	877.2	825.5	779.6	738.0	703.0	667.1	615.8	542.8
65°	1301.1	1146.1	1020.2	922.2	845.3	780.5	726.7	678.5	630.4	571.0	500.3
67.5°	1451.9	1206.0	1016.0	878.2	770.3	681.1	602.8	547.9	498.6	451.9	420.0
70°	1463.8	1123.1	859.5	690.9	566.4	461.7	380.4	320.5	277.6	258.2	272.0
72.5°	1250.9	830.9	571.5	422.9	335.7	260.9	209.7	167.6	133.1	116.1	118.4
75°	736.7	399.0	257.4	191.7	156.6	125.1	108.3	91.4	80.7	64.7	51.7
77.5°	280.5	173.5	129.9	107.9	76.9	55.3	43.6	37.6	34.6	34.1	32.3
80°	161.6	127.2	89.0	58.2	42.6	36.1	30.9	26.5	24.7	24.2	24.9
82.5°	102.1	79.3	48.9	37.5	31.1	26.8	22.3	19.4	17.8	17.3	18.3
85°	52.8	39.7	29.8	25.6	23.8	21.7	17.8	14.9	14.8	15.5	17.8
87.5°	19.5	17.0	13.4	11.6	12.4	11.6	8.4	7.2	6.5	8.6	12.5
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: P145423

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

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3
2.5°	412.7	412.5	412.6	412.3	412.3	412.7	412.2	411.8	412.5	412.5	412.9
5°	406.3	406.6	406.6	406.5	406.8	407.5	407.3	407.3	408.4	408.8	409.4
7.5°	396.2	396.6	396.7	397.1	397.3	398.3	399.0	399.8	401.5	401.9	403.1
10°	382.4	382.1	383.1	382.9	384.2	385.0	385.6	387.4	389.9	391.3	392.5
12.5°	366.1	366.1	366.6	366.8	367.9	369.0	369.7	371.9	374.0	375.8	378.6
15°	348.8	348.2	347.0	346.8	347.3	348.4	349.9	351.6	354.8	357.4	359.8
17.5°	330.7	329.0	327.5	325.5	325.4	325.2	326.1	327.3	332.3	335.0	338.3
20°	314.6	311.0	307.4	303.4	301.0	299.9	300.3	302.0	306.7	310.2	313.7
22.5°	300.3	294.9	289.1	282.7	278.8	276.5	276.7	277.4	280.9	283.0	284.8
25°	288.0	280.5	272.6	264.3	258.9	255.3	255.1	255.1	253.6	253.9	252.9
27.5°	279.7	269.2	259.0	249.4	242.3	238.7	233.8	230.3	227.3	223.1	221.3
30°	271.6	260.9	249.3	238.7	230.2	223.1	214.0	206.5	200.5	194.8	189.9
32.5°	264.3	253.2	242.2	230.6	218.9	206.7	194.8	186.2	177.7	168.9	163.0
35°	257.9	247.5	236.5	223.4	206.9	190.9	177.5	165.8	155.8	145.2	136.7
37.5°	254.3	244.8	233.4	215.6	194.9	176.7	161.8	148.7	135.3	122.6	112.2
40°	252.5	244.1	230.2	207.6	184.2	164.7	148.1	132.4	116.6	101.7	90.9
42.5°	252.2	244.1	225.5	199.5	175.0	154.1	135.6	116.6	97.5	83.1	73.4
45°	254.7	243.9	220.4	192.3	166.8	144.6	122.3	100.1	80.4	67.7	62.4
47.5°	262.0	244.8	216.5	186.2	159.0	134.2	107.3	81.7	64.9	59.2	59.1
50°	273.7	249.3	215.7	181.7	151.3	121.1	89.6	65.4	57.3	57.0	58.5
52.5°	292.2	257.7	217.8	178.6	142.1	104.1	70.9	56.4	54.9	56.4	58.4
55°	333.0	272.6	220.6	173.2	127.2	82.5	58.4	53.5	54.2	56.0	57.8
57.5°	407.3	303.5	223.5	160.9	103.1	63.4	52.5	52.4	53.6	55.2	56.9
60°	454.4	341.7	230.6	142.8	77.9	52.4	50.3	51.7	53.2	54.3	55.7
62.5°	455.9	351.7	234.4	123.5	58.0	47.9	48.4	51.0	52.8	53.2	53.9
65°	426.5	332.8	217.4	100.5	48.1	45.4	47.0	49.3	51.1	51.4	52.0
67.5°	372.6	293.5	184.2	75.8	43.8	43.5	45.1	47.0	48.2	49.3	50.2
70°	280.6	242.2	148.1	58.8	41.1	40.8	42.5	44.0	45.1	46.5	47.9
72.5°	142.3	167.6	112.3	48.1	37.5	37.8	39.6	41.0	41.8	43.1	44.5
75°	48.5	73.2	71.1	38.9	33.4	34.6	35.4	36.9	38.2	39.0	39.7
77.5°	30.4	31.8	36.6	31.4	29.5	29.8	31.2	32.6	34.0	34.6	34.8
80°	25.4	25.5	25.6	25.1	25.2	26.1	26.9	28.4	29.8	30.1	30.2
82.5°	20.1	21.5	21.3	21.2	21.9	22.7	23.3	23.8	24.4	24.7	25.1
85°	17.7	17.4	17.6	18.0	17.4	16.9	16.7	16.7	17.6	18.5	19.0
87.5°	16.2	13.8	10.3	9.8	9.8	9.5	8.9	8.9	9.8	10.6	11.0
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: P145423

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

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	415.3	415.3	415.3	415.3	415.3
2.5°	412.7	412.9	412.7	412.7	413.4
5°	409.7	410.2	410.0	410.4	410.8
7.5°	403.4	404.8	405.1	406.2	405.8
10°	394.4	395.3	396.7	397.8	397.4
12.5°	380.0	382.4	384.5	385.7	385.4
15°	361.7	365.1	367.9	368.9	367.7
17.5°	342.2	344.3	347.7	348.4	349.5
20°	317.6	317.4	320.4	320.4	319.8
22.5°	285.4	287.5	287.5	285.5	284.5
25°	252.5	253.2	251.1	251.5	248.9
27.5°	219.5	217.7	216.0	216.7	214.7
30°	188.0	184.1	182.4	182.7	180.6
32.5°	157.7	153.1	151.5	149.2	147.4
35°	130.3	123.0	118.7	117.6	118.9
37.5°	103.4	98.2	93.1	89.3	89.7
40°	81.8	76.5	73.2	71.6	71.3
42.5°	67.6	64.5	63.8	64.0	64.0
45°	61.3	61.5	62.0	62.6	62.7
47.5°	60.1	60.9	61.9	62.6	62.7
50°	59.9	60.8	61.5	62.3	62.6
52.5°	59.8	60.3	60.8	61.2	61.6
55°	59.2	59.5	59.4	59.6	60.1
57.5°	57.8	58.0	57.7	57.8	58.7
60°	56.6	56.7	56.2	56.9	57.0
62.5°	55.0	54.9	54.6	55.0	55.0
65°	52.8	52.0	52.3	52.7	52.8
67.5°	50.2	49.3	49.3	49.6	50.0
70°	46.8	46.4	46.4	47.0	47.5
72.5°	43.1	43.3	44.2	45.0	45.8
75°	40.0	40.7	41.5	43.6	44.9
77.5°	36.1	36.2	36.9	39.0	41.2
80°	30.7	30.5	30.7	30.9	31.4
82.5°	24.2	24.0	23.1	23.4	22.9
85°	17.8	17.4	16.4	15.7	15.6
87.5°	10.3	10.3	9.9	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)