

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: P146586

Luminaire Tested: **LDRL-T3-F01-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146586
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-F01-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2529.2 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

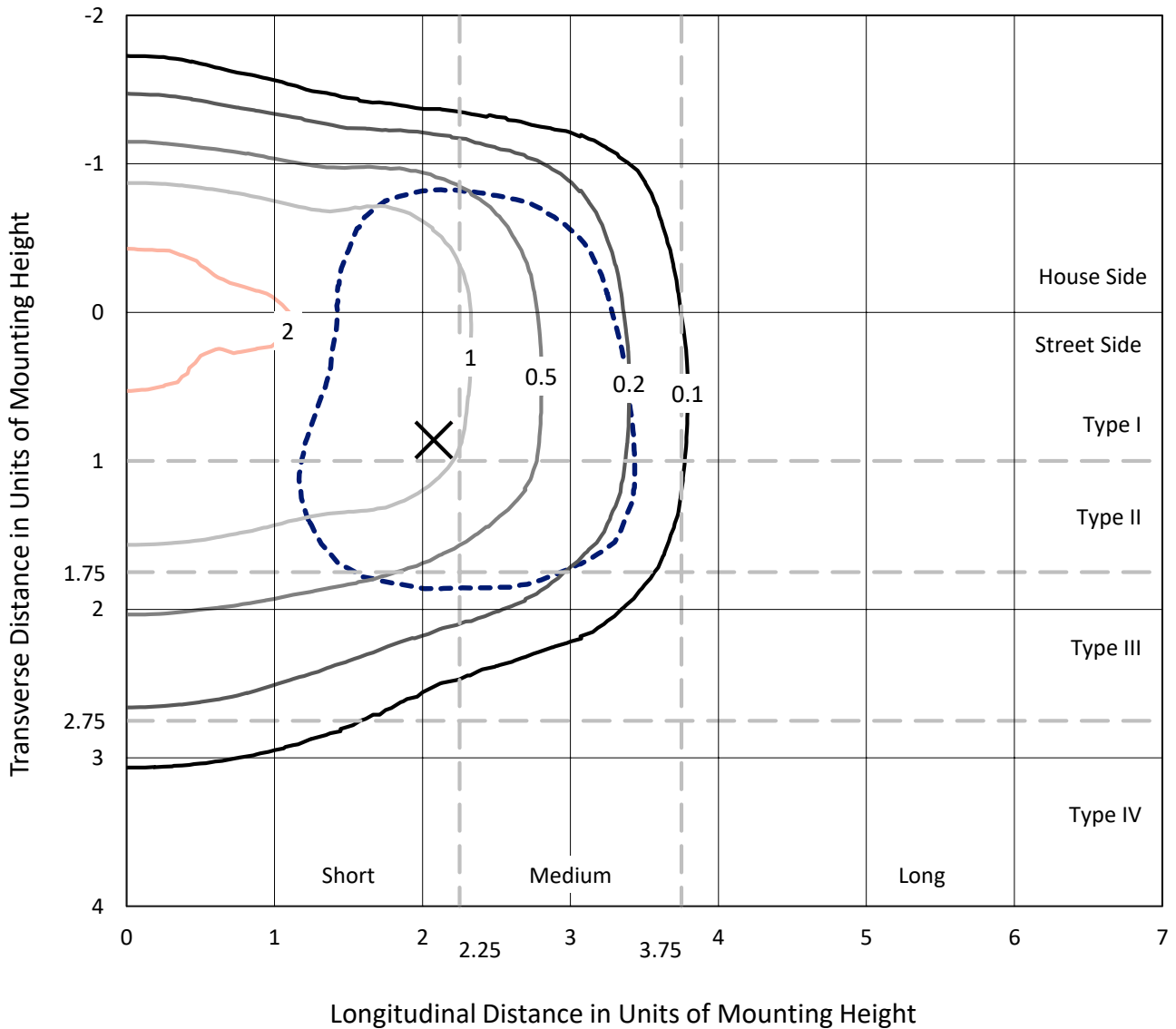
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P146586
 CATALOG NUMBER: LDRL-T3-F01-E-7050

Iso-Footcandle Lines of Horizontal Illumination

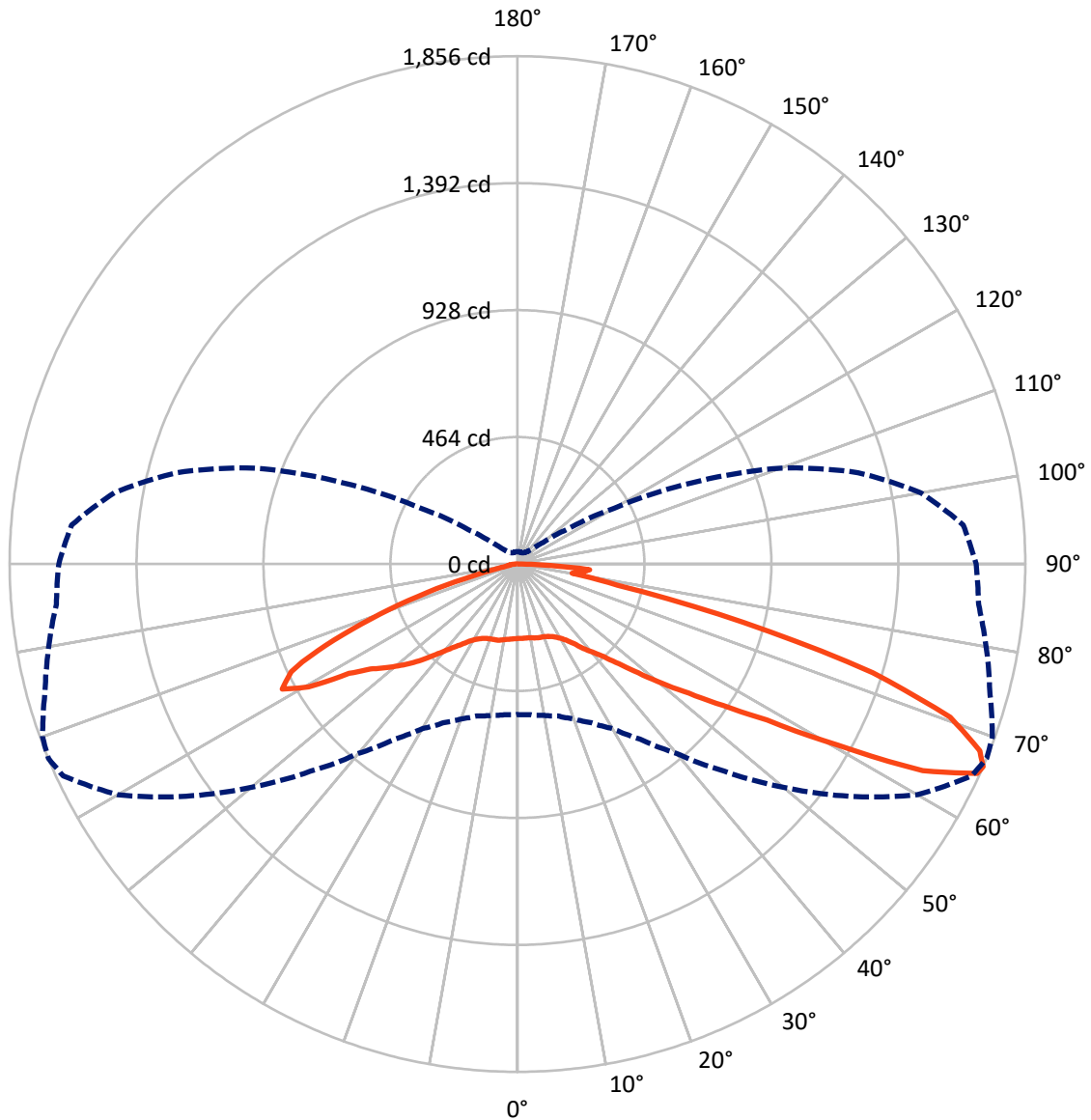
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P146586
CATALOG NUMBER: LDRL-T3-F01-E-7050

Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

REPORT NUMBER: P146586

CATALOG NUMBER: LDRL-T3-F01-E-7050

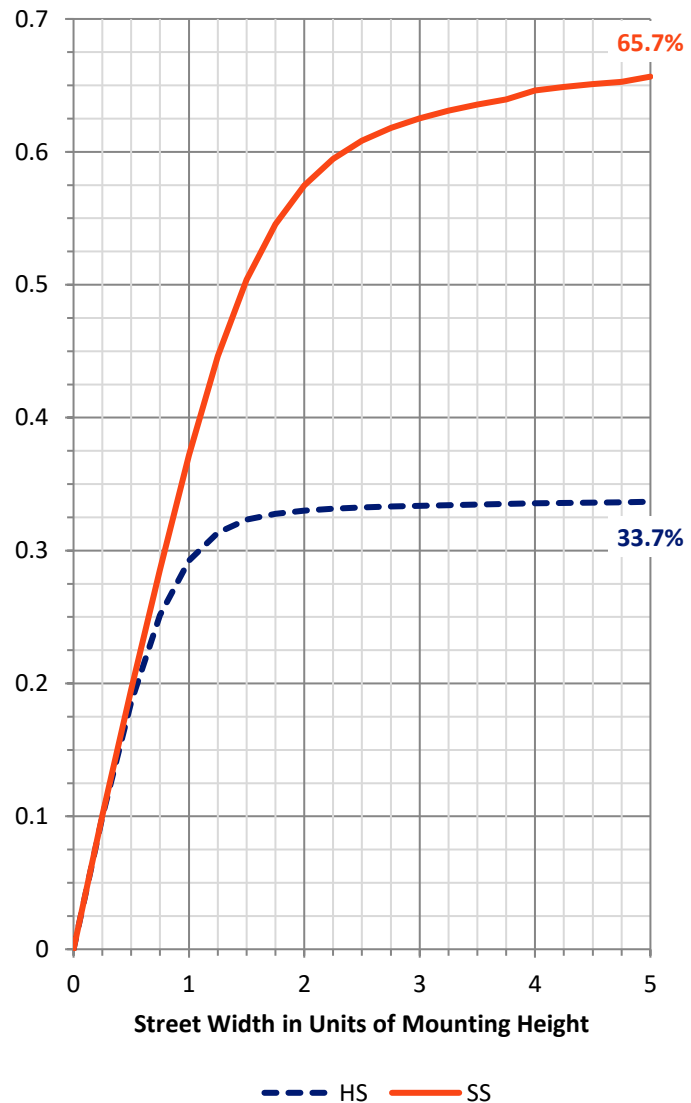
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	859.2	0.0	859.2
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	1670.0	0.0	1670.0
	% Fixture	66.0	0.0	66.0
Total	Lumens	2529.2	0.0	2529.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.2	1.0
10°-20°	77.5	3.1
20°-30°	133.2	5.3
30°-40°	214.3	8.5
40°-50°	353.2	14.0
50°-60°	553.6	21.9
60°-70°	766.1	30.3
70°-80°	346.7	13.7
80°-90°	58.5	2.3
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°	2529.2	100.0
0°-180°	2529.2	100.0



REPORT NUMBER: P146586

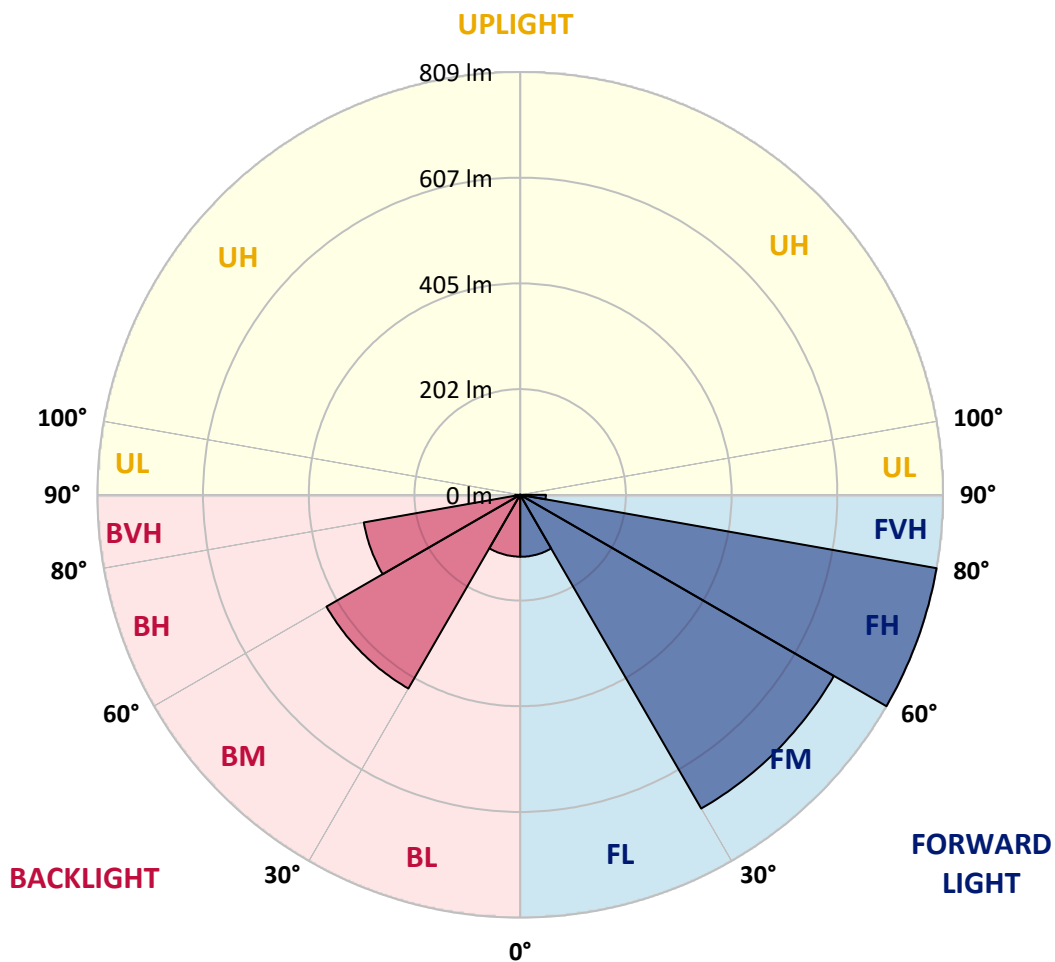
CATALOG NUMBER: LDRL-T3-F01-E-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	118.6	4.7			
FM (30°-60°)	693.1	27.4			
FH (60°-80°)	809.1	32.0			G1/1800
FVH (80°-90°)	49.2	1.9			G1/100
BL (0°-30°)	118.2	4.7	B1/500		
BM (30°-60°)	427.9	16.9	B1/1000		
BH (60°-80°)	303.8	12.0	B1/500		G1/500
BVH (80°-90°)	9.3	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 III Short





REPORT NUMBER: P146586

CATALOG NUMBER: LDRL-T3-F01-E-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3
2.5°	271.9	271.7	271.6	271.6	271.4	271.6	271.7	271.9	271.7	271.9	271.7
5°	271.4	271.4	271.2	271.2	271.2	271.2	271.4	271.6	271.4	271.7	271.4
7.5°	269.2	270.2	269.9	270.2	270.6	270.9	271.1	271.4	271.9	272.3	271.9
10°	266.3	266.8	267.0	267.3	268.0	268.9	269.5	270.4	271.6	271.9	272.3
12.5°	261.1	261.7	262.3	262.9	263.9	265.3	266.5	267.8	269.9	271.2	272.4
15°	257.2	258.0	258.2	259.0	260.1	261.6	263.1	265.1	267.8	270.2	272.6
17.5°	259.7	260.1	259.7	259.7	260.1	260.7	261.9	263.6	266.5	269.4	272.3
20°	267.3	267.3	267.0	266.8	266.5	265.8	265.6	265.5	267.3	269.5	272.1
22.5°	274.6	274.6	274.5	275.1	275.0	275.0	274.5	273.6	272.8	272.4	274.1
25°	279.2	279.9	280.2	281.2	281.9	282.9	283.3	283.1	281.9	279.9	279.4
27.5°	286.7	287.2	287.5	288.7	290.0	291.2	292.4	293.9	293.9	292.1	289.5
30°	301.1	300.4	300.7	301.1	302.2	303.9	305.5	307.5	308.5	307.8	304.4
32.5°	314.4	315.1	315.5	316.5	317.7	320.2	322.1	324.4	326.6	327.0	325.3
35°	334.1	333.7	333.2	336.8	338.2	341.0	343.2	346.6	348.3	349.8	348.8
37.5°	365.1	364.1	363.4	364.4	366.3	368.1	371.4	373.9	376.8	380.3	379.2
40°	409.0	411.0	408.1	409.5	411.0	406.8	409.6	412.0	416.9	417.1	416.9
42.5°	466.1	467.6	466.9	467.8	465.0	463.7	462.5	463.7	469.8	468.9	464.9
45°	523.2	525.4	524.8	525.2	530.4	528.2	530.1	530.4	536.7	535.0	532.0
47.5°	571.9	575.7	576.5	579.6	586.7	592.4	600.4	606.3	609.4	611.4	613.8
50°	610.6	613.3	618.0	625.7	636.0	646.0	663.9	675.6	686.3	693.8	701.4
52.5°	636.2	639.2	646.5	658.0	672.9	691.2	712.2	736.6	759.1	772.4	783.7
55°	646.7	649.7	658.7	673.8	693.6	717.0	747.1	781.5	811.5	841.8	859.3
57.5°	640.6	643.9	654.3	671.2	695.1	725.8	763.2	805.4	849.3	895.2	930.3
60°	622.6	625.7	637.3	655.0	682.2	716.8	761.7	814.5	876.2	944.3	1010.9
62.5°	597.9	602.4	612.8	630.7	657.8	695.6	746.8	815.6	904.0	1013.8	1143.4
65°	566.4	569.7	578.9	593.1	622.9	662.4	716.5	800.7	916.2	1071.9	1256.9
66°	550.1	553.3	561.8	575.2	602.4	640.4	694.4	780.7	902.6	1071.6	1268.9
67.5°	521.5	523.0	529.1	542.3	560.1	594.1	644.3	725.1	845.2	1026.3	1235.4
70°	437.4	439.6	445.6	452.3	458.9	471.1	506.2	559.6	655.6	829.3	1028.7
72.5°	302.6	306.0	312.4	324.9	335.3	350.7	364.4	382.2	414.1	534.7	735.9
75°	218.7	219.9	229.4	251.4	272.3	303.1	330.4	339.0	328.2	326.3	432.3
77.5°	130.4	132.1	145.9	168.1	189.7	231.6	287.5	330.7	354.6	346.1	327.3
80°	54.9	57.3	65.4	71.2	89.1	124.2	179.4	247.2	310.2	349.0	340.2
82.5°	17.6	20.5	24.2	29.3	34.6	46.3	71.7	107.2	169.4	252.6	310.5
85°	6.4	6.6	9.1	12.7	14.1	16.3	20.8	32.2	57.3	94.7	176.2
87.5°	2.5	3.0	3.6	4.9	5.1	5.3	5.9	7.6	7.5	6.4	33.4
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: P146586

CATALOG NUMBER: LDRL-T3-F01-E-7050

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3
2.5°	271.9	272.3	272.1	272.3	272.3	271.9	271.9	272.6	272.1	272.4	272.4
5°	271.7	272.1	271.9	272.3	272.3	272.1	272.1	273.1	272.9	273.4	273.8
7.5°	272.4	272.6	272.4	272.4	272.9	272.8	272.9	273.3	274.1	275.0	275.6
10°	273.3	273.6	274.1	274.3	275.0	274.8	275.3	275.8	276.7	277.5	278.3
12.5°	274.5	275.5	277.0	277.3	278.0	278.5	279.4	279.9	280.6	281.9	282.9
15°	275.5	277.3	279.2	279.9	280.6	281.2	282.1	282.6	283.8	285.0	286.1
17.5°	275.8	278.0	280.4	281.2	281.9	283.1	284.1	285.1	286.5	288.0	289.4
20°	276.0	279.0	282.1	283.1	284.6	286.3	288.0	288.9	290.7	292.6	293.8
22.5°	277.5	281.2	285.5	287.3	288.9	291.9	294.1	295.5	297.7	299.2	299.7
25°	281.7	285.6	290.7	293.6	296.1	300.5	303.3	305.8	307.0	309.0	308.5
27.5°	289.4	292.4	299.0	302.9	306.1	311.9	317.1	319.5	321.4	322.4	321.2
30°	302.4	303.6	310.9	315.6	321.0	330.0	335.8	338.8	341.2	341.4	338.3
32.5°	321.9	320.0	326.5	333.2	340.4	351.2	359.0	362.2	364.1	364.2	357.5
35°	348.3	345.1	350.5	357.1	365.9	380.2	390.0	393.7	396.6	395.2	385.2
37.5°	381.7	381.5	384.1	392.5	402.5	420.8	431.2	433.2	433.0	429.0	413.9
40°	418.8	415.7	416.1	422.2	433.7	457.8	472.2	475.5	474.4	468.4	448.8
42.5°	465.6	464.2	459.6	462.8	473.5	502.8	520.3	523.7	524.7	514.9	491.6
45°	531.1	529.9	519.8	520.4	528.2	559.1	577.2	582.8	583.0	573.6	543.5
47.5°	610.6	609.6	597.7	594.3	598.2	625.7	648.2	649.4	649.7	636.8	605.5
50°	700.7	697.8	688.8	685.3	680.7	711.0	729.2	729.0	727.1	712.9	677.7
52.5°	787.8	794.2	790.8	783.9	784.1	805.9	823.0	813.5	814.7	801.2	760.7
55°	880.8	897.2	909.6	912.1	910.9	922.1	931.6	914.7	908.4	906.2	863.2
57.5°	979.6	1021.6	1059.7	1075.6	1069.5	1090.0	1098.5	1080.9	1081.2	1098.5	1061.4
60°	1111.5	1217.6	1313.6	1343.5	1357.4	1391.2	1376.2	1375.1	1401.7	1424.1	1355.3
62.5°	1311.8	1487.5	1640.8	1663.0	1674.2	1681.8	1675.0	1656.5	1684.0	1686.7	1580.6
65°	1463.6	1669.8	1818.0	1845.8	1843.7	1804.9	1767.3	1730.4	1730.1	1703.0	1566.4
66°	1480.0	1687.0	1831.5	1856.1	1847.1	1787.3	1739.6	1691.6	1676.2	1635.5	1497.0
67.5°	1444.1	1656.9	1800.4	1822.4	1803.3	1712.3	1647.2	1582.3	1559.1	1502.5	1361.3
70°	1234.5	1453.8	1645.7	1677.5	1654.8	1534.1	1437.7	1366.3	1303.1	1247.4	1130.8
72.5°	957.2	1121.2	1324.3	1357.5	1359.4	1264.9	1156.3	1087.8	1014.3	958.4	871.0
75°	627.9	751.9	863.5	852.3	855.5	781.2	716.5	659.5	593.0	548.9	507.2
77.5°	367.0	411.3	401.2	373.4	350.0	275.1	196.9	135.2	117.9	123.0	138.8
80°	319.0	294.1	230.2	202.5	184.2	125.0	67.3	47.4	41.7	42.2	44.7
82.5°	343.4	356.3	292.4	240.7	209.9	147.2	79.1	39.5	28.5	33.2	36.6
85°	266.5	339.2	312.7	264.3	222.3	156.5	80.8	25.1	16.9	22.7	28.6
87.5°	75.9	120.1	96.1	84.9	68.4	46.8	19.3	10.0	9.1	11.9	16.4
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: P146586

CATALOG NUMBER: LDRL-T3-F01-E-7050

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3	272.3
2.5°	272.6	272.6	273.1	273.3	273.4	273.4	273.8	273.8	273.9	274.6	274.5
5°	274.3	274.8	275.5	275.8	276.3	276.5	277.0	277.0	277.5	278.0	277.8
7.5°	276.3	276.8	277.3	277.8	278.3	279.0	278.9	278.7	278.5	278.2	277.8
10°	279.2	279.7	280.2	280.0	279.7	279.4	278.0	276.5	275.8	274.5	273.4
12.5°	283.9	284.4	283.9	282.6	280.7	278.5	275.6	273.1	271.6	269.5	268.4
15°	287.5	288.0	287.0	284.6	281.6	278.7	274.8	271.6	268.9	266.7	265.0
17.5°	290.2	289.9	287.7	285.0	281.7	279.4	275.8	272.3	269.0	266.0	263.6
20°	294.1	292.2	289.0	285.6	282.4	280.4	277.5	274.3	270.9	266.5	263.4
22.5°	299.2	295.8	291.6	288.2	285.1	283.1	280.2	277.2	273.9	268.9	264.6
25°	306.5	301.1	296.1	292.6	289.9	287.8	284.3	281.1	277.5	272.4	267.0
27.5°	316.6	308.8	303.8	300.2	297.5	295.1	290.5	286.7	282.1	277.0	270.6
30°	329.9	320.4	314.8	311.7	308.8	305.5	300.5	294.8	288.9	282.1	275.1
32.5°	346.3	335.6	330.4	327.3	323.6	319.0	312.6	304.9	296.1	287.2	278.5
35°	369.7	357.5	351.7	346.5	341.0	334.3	324.6	313.6	301.9	290.2	279.5
37.5°	392.9	381.5	374.4	369.0	360.5	349.5	336.1	320.9	305.3	290.4	277.5
40°	425.7	412.5	404.2	394.6	380.8	363.7	344.3	323.8	304.4	286.5	271.2
42.5°	466.1	451.0	438.6	421.2	399.8	375.1	348.1	322.1	298.5	277.8	261.1
45°	517.1	497.4	476.7	449.3	416.6	382.0	348.0	316.1	288.3	265.0	248.4
47.5°	576.5	548.9	514.2	472.3	427.6	383.7	342.6	305.5	273.1	247.3	228.2
50°	637.7	597.7	548.4	490.1	433.2	379.5	330.5	288.0	253.1	223.8	203.1
52.5°	713.1	651.1	579.4	502.1	430.8	367.0	310.5	263.4	226.2	197.5	173.8
55°	802.9	712.4	608.9	508.8	420.3	344.4	280.2	231.3	192.1	166.0	144.7
57.5°	951.4	808.4	659.2	518.6	399.7	310.9	243.3	192.6	155.9	133.7	116.6
60°	1207.6	1005.5	765.6	542.8	371.0	263.1	196.4	150.9	120.6	102.8	90.8
62.5°	1386.3	1124.9	822.8	534.5	322.4	207.2	145.2	107.9	87.9	76.2	68.1
65°	1351.6	1077.8	753.9	454.0	252.6	146.5	96.6	73.0	61.7	54.4	50.3
66°	1289.2	1025.8	701.4	407.6	219.1	122.1	79.6	60.5	53.0	47.8	45.1
67.5°	1175.6	918.1	607.0	327.1	164.0	90.1	60.5	47.1	43.0	40.3	38.5
70°	973.3	725.9	417.9	193.3	86.7	50.5	38.5	34.7	32.9	31.7	31.5
72.5°	746.3	520.8	241.8	93.5	46.4	33.5	29.5	28.1	27.4	27.1	27.1
75°	461.0	293.8	108.1	46.9	32.0	27.4	25.6	24.9	24.7	24.7	24.7
77.5°	162.1	102.3	48.5	34.4	28.1	24.7	23.2	22.9	23.2	23.2	23.2
80°	44.7	39.5	35.1	30.5	25.4	22.9	21.5	21.3	22.0	22.2	21.5
82.5°	34.9	32.9	30.0	27.3	23.2	20.8	20.2	20.5	20.8	20.3	19.3
85°	29.8	28.5	21.0	21.0	18.8	18.1	18.0	18.3	18.1	16.8	15.4
87.5°	16.9	14.9	11.4	12.4	13.2	13.6	11.4	12.2	12.0	10.7	10.0
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: P146586

CATALOG NUMBER: LDRL-T3-F01-E-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	272.3	272.3	272.3	272.3	272.3
2.5°	274.8	274.8	275.1	275.1	275.0
5°	278.2	278.2	278.7	278.3	278.5
7.5°	277.5	276.8	276.8	276.5	276.3
10°	272.8	271.6	270.9	271.2	270.7
12.5°	267.3	266.3	265.6	265.5	265.3
15°	263.9	262.8	262.3	261.9	261.9
17.5°	262.1	260.7	260.1	259.5	259.4
20°	261.2	259.5	258.5	258.0	257.7
22.5°	261.6	259.5	258.2	257.5	257.2
25°	262.9	260.4	258.7	257.8	257.3
27.5°	265.3	261.9	260.1	258.9	258.2
30°	268.2	263.4	260.7	259.0	258.4
32.5°	270.0	263.6	260.2	257.7	257.0
35°	269.7	261.7	257.3	254.1	253.6
37.5°	266.3	256.8	251.4	247.2	246.7
40°	259.0	249.4	243.1	238.9	237.9
42.5°	248.9	238.9	232.1	228.2	226.8
45°	234.0	221.8	215.5	212.3	210.4
47.5°	213.0	201.4	194.5	191.8	189.4
50°	189.1	176.4	171.3	168.2	165.5
52.5°	160.9	150.1	146.2	143.3	141.1
55°	133.7	126.0	121.5	118.4	118.6
57.5°	107.4	102.8	100.3	97.1	97.4
60°	84.5	80.6	80.6	78.6	77.9
62.5°	64.5	63.0	62.5	61.8	60.7
65°	49.0	49.0	49.1	49.1	48.5
66°	44.0	44.6	45.2	45.2	44.4
67.5°	38.1	38.8	39.5	39.8	39.8
70°	31.5	32.4	32.7	33.0	32.9
72.5°	27.6	28.3	28.3	28.5	28.1
75°	25.1	25.4	25.6	25.2	25.1
77.5°	23.2	23.4	23.2	23.0	22.9
80°	21.0	20.8	20.3	19.7	19.5
82.5°	18.1	17.4	17.1	16.1	15.9
85°	14.6	13.7	13.0	11.7	11.0
87.5°	9.7	9.3	8.8	6.4	5.3
90°	0.0	0.0	0.0	0.0	0.0

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