

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: P146585

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P146585  
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  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (7) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2464.8 lumens  
Efficiency: N/A  
Efficacy: 95.2 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

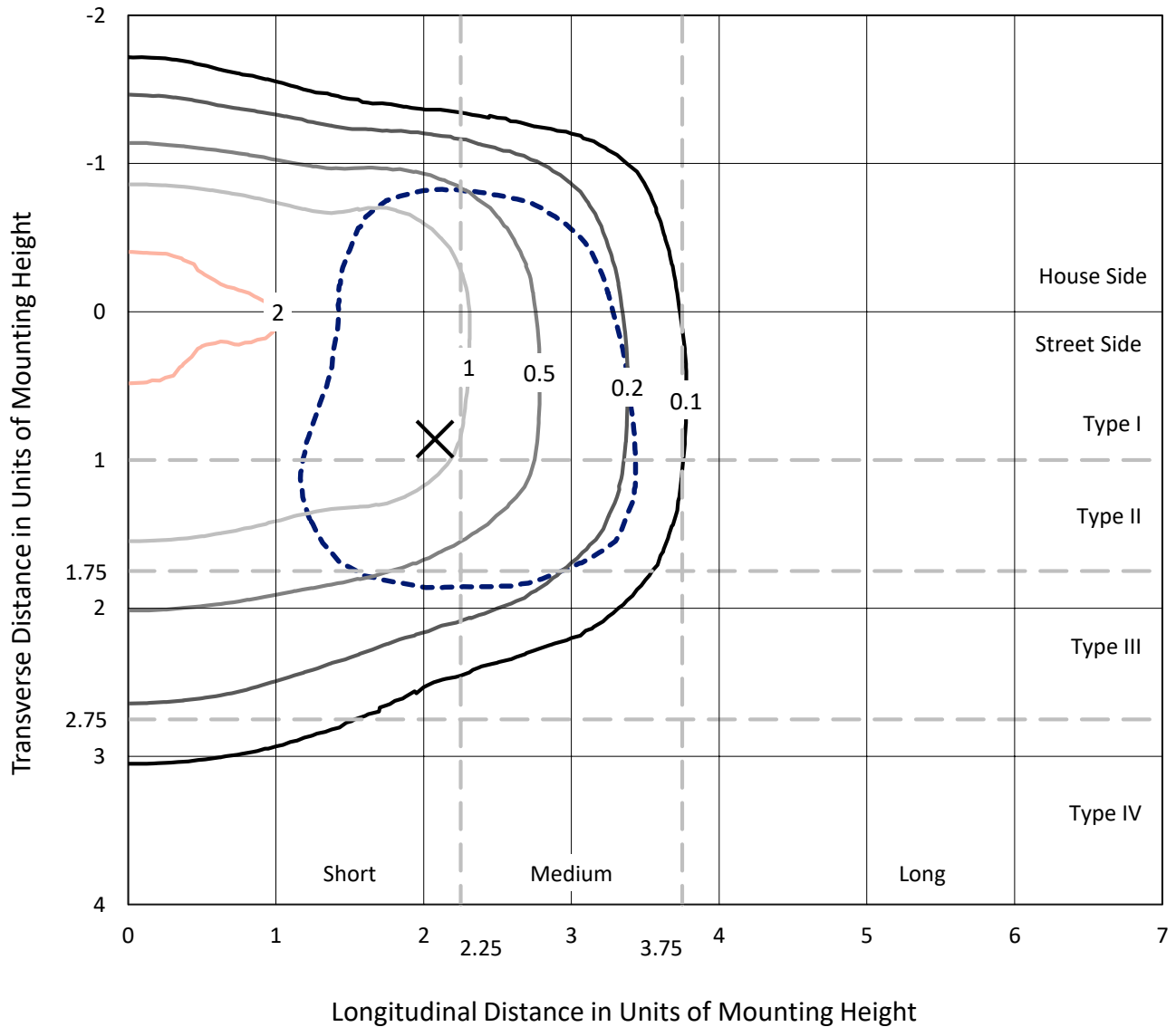
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

### Iso-Footcandle Lines of Horizontal Illumination

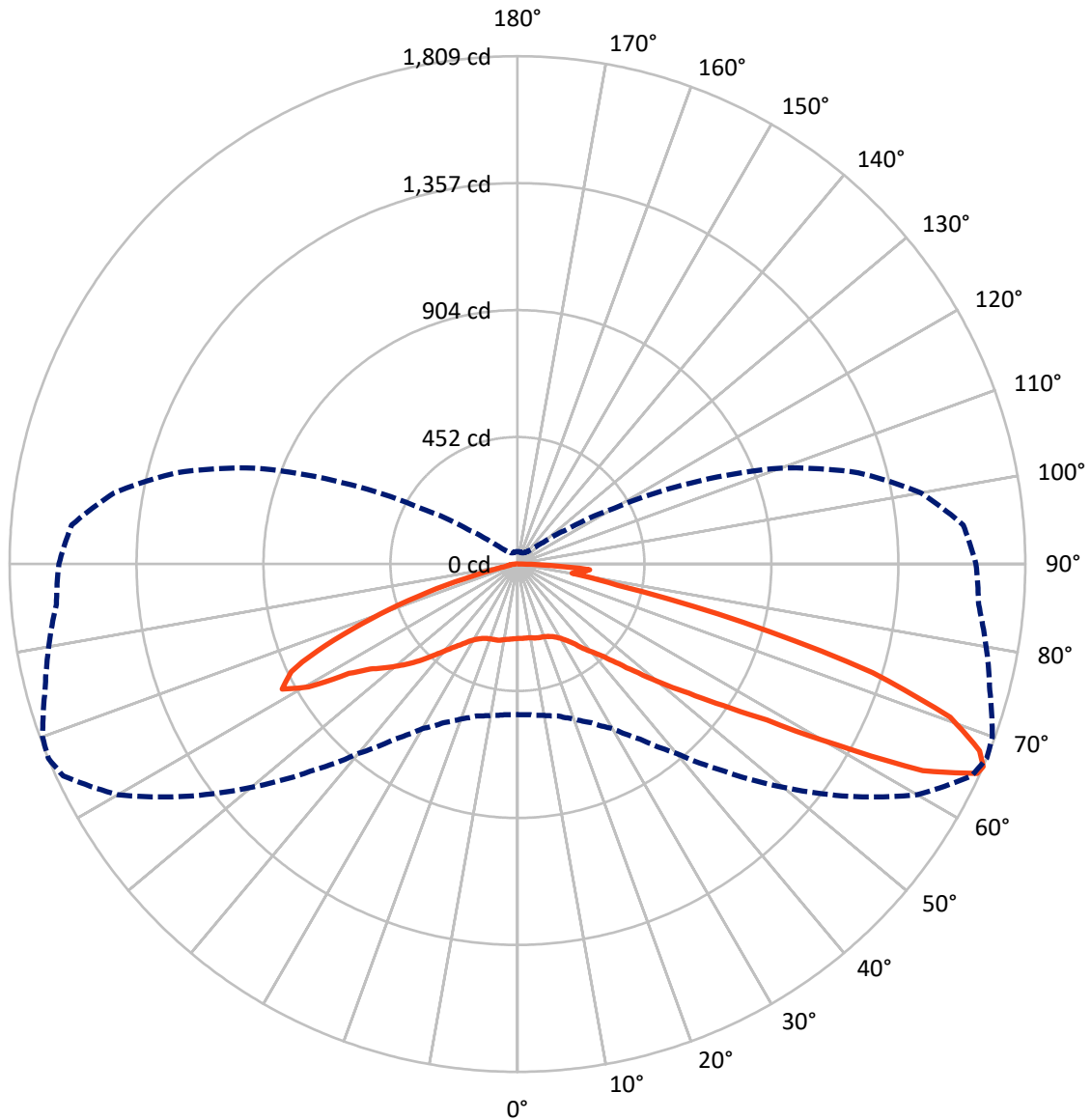
✕ Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P146585  
CATALOG NUMBER: LDRL-T3-F01-E

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

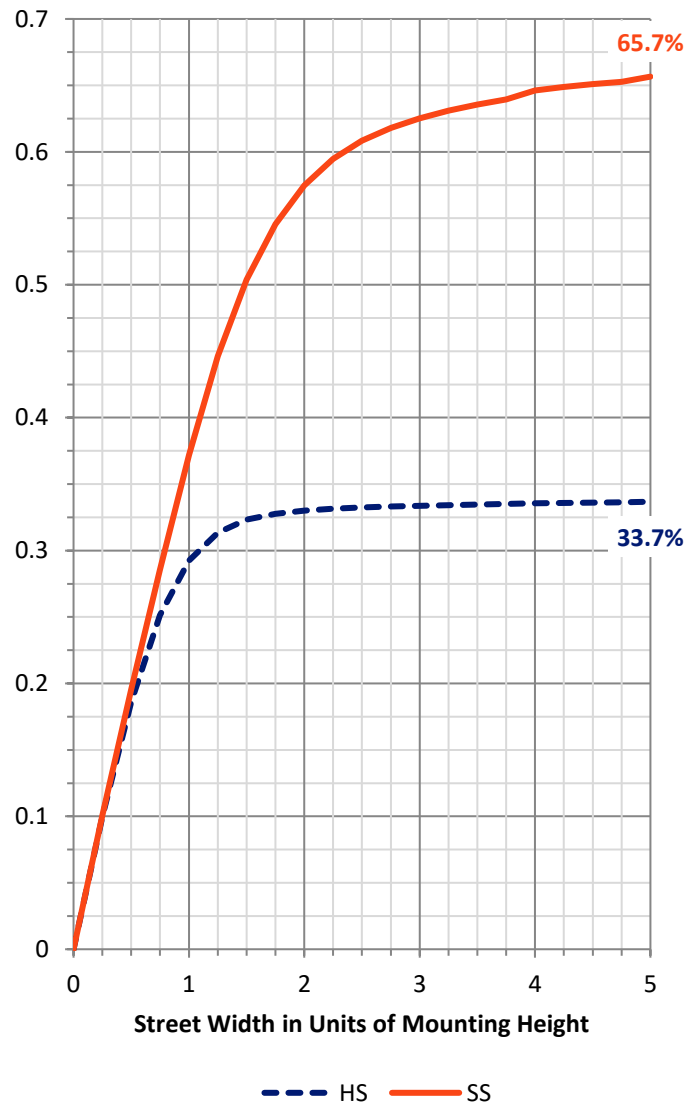
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	837.4	0.0	837.4
	% Fixture	34.0	0.0	34.0
<b>Street Side</b>	Lumens	1627.5	0.0	1627.5
	% Fixture	66.0	0.0	66.0
<b>Total</b>	Lumens	2464.8	0.0	2464.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	1.0
10°-20°	75.5	3.1
20°-30°	129.8	5.3
30°-40°	208.8	8.5
40°-50°	344.2	14.0
50°-60°	539.5	21.9
60°-70°	746.6	30.3
70°-80°	337.9	13.7
80°-90°	57.0	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°	2464.8	100.0
0°-180°	2464.8	100.0



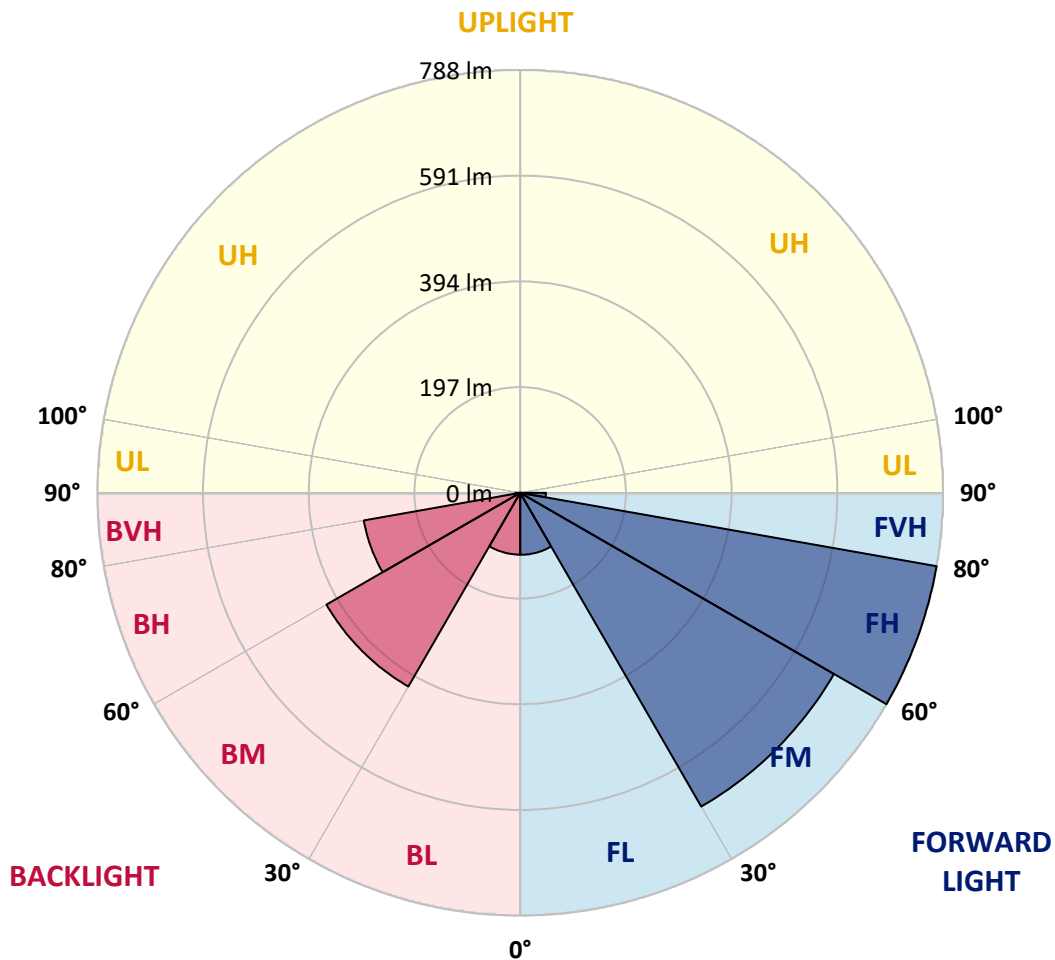
REPORT NUMBER: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	115.6	4.7			
FM	(30°-60°)	675.5	27.4			
FH	(60°-80°)	788.5	32.0			G1/1800
FVH	(80°-90°)	47.9	1.9			G1/100
BL	(0°-30°)	115.2	4.7	B1/500		
BM	(30°-60°)	417.0	16.9	B1/1000		
BH	(60°-80°)	296.0	12.0	B1/500		G1/500
BVH	(80°-90°)	9.1	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: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3
2.5°	265.0	264.8	264.7	264.7	264.5	264.7	264.8	265.0	264.8	265.0	264.8
5°	264.5	264.5	264.3	264.3	264.3	264.3	264.5	264.7	264.5	264.8	264.5
7.5°	262.4	263.3	263.0	263.3	263.7	264.0	264.2	264.5	265.0	265.3	265.0
10°	259.5	260.0	260.2	260.5	261.2	262.0	262.7	263.5	264.7	265.0	265.3
12.5°	254.4	255.1	255.6	256.2	257.2	258.6	259.7	261.0	263.0	264.3	265.5
15°	250.6	251.5	251.6	252.4	253.4	254.9	256.4	258.4	261.0	263.3	265.7
17.5°	253.1	253.4	253.1	253.1	253.4	254.1	255.3	256.9	259.7	262.5	265.3
20°	260.5	260.5	260.2	260.0	259.7	259.0	258.9	258.7	260.5	262.7	265.2
22.5°	267.6	267.6	267.5	268.1	268.0	268.0	267.5	266.6	265.8	265.5	267.1
25°	272.1	272.8	273.1	274.1	274.7	275.7	276.1	275.9	274.7	272.8	272.3
27.5°	279.4	279.9	280.2	281.3	282.7	283.8	285.0	286.5	286.5	284.6	282.2
30°	293.4	292.7	293.1	293.4	294.5	296.2	297.7	299.7	300.7	300.0	296.7
32.5°	306.4	307.1	307.4	308.4	309.6	312.0	313.9	316.2	318.3	318.7	317.0
35°	325.6	325.3	324.8	328.2	329.5	332.4	334.5	337.8	339.5	340.9	340.0
37.5°	355.8	354.8	354.2	355.1	357.0	358.8	361.9	364.4	367.2	370.7	369.5
40°	398.6	400.5	397.7	399.1	400.5	396.4	399.2	401.5	406.3	406.5	406.3
42.5°	454.2	455.7	455.0	455.9	453.2	451.9	450.7	451.9	457.8	457.0	453.0
45°	509.8	512.0	511.5	511.8	516.9	514.8	516.6	516.9	523.1	521.4	518.4
47.5°	557.4	561.0	561.9	564.8	571.8	577.4	585.1	590.9	593.9	595.9	598.2
50°	595.0	597.7	602.3	609.7	619.8	629.5	647.0	658.4	668.8	676.1	683.5
52.5°	620.0	622.9	630.0	641.3	655.8	673.6	694.1	717.9	739.8	752.7	763.8
55°	630.2	633.2	641.9	656.6	675.9	698.7	728.1	761.6	790.9	820.4	837.4
57.5°	624.3	627.6	637.6	654.1	677.4	707.3	743.8	784.9	827.7	872.4	906.6
60°	606.8	609.7	621.1	638.3	664.9	698.6	742.3	793.8	853.9	920.3	985.2
62.5°	582.7	587.1	597.2	614.7	641.1	677.9	727.8	794.8	881.0	988.0	1114.3
65°	551.9	555.2	564.2	578.0	607.1	645.6	698.2	780.3	892.9	1044.6	1224.9
66°	536.1	539.2	547.5	560.5	587.1	624.1	676.8	760.8	879.7	1044.3	1236.6
67.5°	508.2	509.7	515.6	528.5	545.8	579.0	627.9	706.6	823.7	1000.2	1203.9
70°	426.3	428.4	434.2	440.8	447.3	459.2	493.3	545.3	639.0	808.2	1002.5
72.5°	294.9	298.2	304.5	316.7	326.7	341.8	355.1	372.5	403.5	521.1	717.2
75°	213.2	214.3	223.6	245.0	265.3	295.4	322.0	330.4	319.8	318.0	421.3
77.5°	127.1	128.8	142.2	163.8	184.9	225.7	280.2	322.3	345.6	337.3	319.0
80°	53.5	55.8	63.7	69.3	86.8	121.0	174.8	240.9	302.3	340.1	331.5
82.5°	17.2	20.0	23.6	28.6	33.7	45.1	69.8	104.5	165.1	246.2	302.6
85°	6.3	6.4	8.9	12.4	13.7	15.9	20.3	31.4	55.8	92.3	171.7
87.5°	2.5	3.0	3.5	4.8	5.0	5.1	5.8	7.4	7.3	6.3	32.5
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: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3
2.5°	265.0	265.3	265.2	265.3	265.3	265.0	265.0	265.7	265.2	265.5	265.5
5°	264.8	265.2	265.0	265.3	265.3	265.2	265.2	266.1	266.0	266.5	266.8
7.5°	265.5	265.7	265.5	265.5	266.0	265.8	266.0	266.3	267.1	268.0	268.6
10°	266.3	266.6	267.1	267.3	268.0	267.8	268.3	268.8	269.6	270.4	271.3
12.5°	267.5	268.5	269.9	270.3	270.9	271.4	272.3	272.8	273.4	274.7	275.7
15°	268.5	270.3	272.1	272.8	273.4	274.1	274.9	275.4	276.6	277.7	278.9
17.5°	268.8	270.9	273.2	274.1	274.7	275.9	276.9	277.9	279.2	280.7	282.0
20°	269.0	271.9	274.9	275.9	277.4	279.0	280.7	281.5	283.3	285.1	286.3
22.5°	270.4	274.1	278.2	280.0	281.5	284.5	286.6	287.9	290.1	291.6	292.1
25°	274.6	278.4	283.3	286.1	288.6	292.9	295.5	298.0	299.2	301.2	300.7
27.5°	282.0	285.0	291.4	295.2	298.3	304.0	309.1	311.4	313.2	314.2	313.0
30°	294.7	295.9	303.0	307.6	312.9	321.6	327.2	330.2	332.5	332.7	329.7
32.5°	313.7	311.9	318.2	324.8	331.7	342.3	349.9	353.0	354.8	355.0	348.4
35°	339.5	336.3	341.6	348.0	356.6	370.5	380.1	383.7	386.5	385.2	375.4
37.5°	372.0	371.8	374.3	382.5	392.3	410.1	420.2	422.2	422.0	418.0	403.4
40°	408.1	405.2	405.5	411.4	422.7	446.1	460.1	463.4	462.3	456.5	437.4
42.5°	453.7	452.4	447.9	451.1	461.5	490.0	507.0	510.3	511.3	501.8	479.1
45°	517.6	516.4	506.5	507.2	514.8	544.8	562.5	568.0	568.1	559.0	529.7
47.5°	595.0	594.0	582.5	579.2	583.0	609.7	631.7	632.8	633.2	620.6	590.1
50°	682.9	680.1	671.3	667.8	663.4	692.9	710.6	710.4	708.6	694.8	660.4
52.5°	767.7	774.0	770.7	763.9	764.1	785.4	802.1	792.8	794.0	780.8	741.3
55°	858.4	874.4	886.4	888.9	887.8	898.7	907.9	891.4	885.3	883.1	841.2
57.5°	954.6	995.6	1032.7	1048.3	1042.3	1062.3	1070.5	1053.4	1053.7	1070.5	1034.4
60°	1083.3	1186.6	1280.2	1309.3	1322.8	1355.8	1341.1	1340.2	1366.1	1387.9	1320.8
62.5°	1278.4	1449.6	1599.0	1620.7	1631.6	1639.0	1632.4	1614.4	1641.1	1643.8	1540.4
65°	1426.3	1627.3	1771.7	1798.8	1796.8	1759.0	1722.4	1686.4	1686.1	1659.6	1526.6
66°	1442.4	1644.1	1784.9	1808.9	1800.1	1741.9	1695.3	1648.6	1633.5	1593.9	1458.9
67.5°	1407.4	1614.7	1754.6	1776.0	1757.4	1668.7	1605.3	1542.1	1519.5	1464.3	1326.6
70°	1203.1	1416.8	1603.8	1634.9	1612.7	1495.0	1401.1	1331.6	1270.0	1215.7	1102.1
72.5°	932.8	1092.7	1290.6	1323.0	1324.8	1232.7	1126.8	1060.1	988.5	934.0	848.8
75°	611.9	732.7	841.5	830.6	833.8	761.3	698.2	642.8	577.9	534.9	494.3
77.5°	357.6	400.9	391.0	363.9	341.1	268.1	191.9	131.8	114.9	119.9	135.2
80°	310.9	286.6	224.4	197.3	179.5	121.8	65.5	46.2	40.6	41.1	43.6
82.5°	334.7	347.2	285.0	234.6	204.6	143.5	77.1	38.5	27.7	32.4	35.7
85°	259.7	330.5	304.8	257.6	216.6	152.6	78.8	24.4	16.5	22.1	27.9
87.5°	74.0	117.1	93.6	82.7	66.7	45.6	18.8	9.7	8.9	11.6	16.0
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: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3	265.3
2.5°	265.7	265.7	266.1	266.3	266.5	266.5	266.8	266.8	267.0	267.6	267.5
5°	267.3	267.8	268.5	268.8	269.3	269.5	269.9	269.9	270.4	270.9	270.8
7.5°	269.3	269.8	270.3	270.8	271.3	271.9	271.8	271.6	271.4	271.1	270.8
10°	272.1	272.6	273.1	272.9	272.6	272.3	270.9	269.5	268.8	267.5	266.5
12.5°	276.7	277.2	276.7	275.4	273.6	271.4	268.6	266.1	264.7	262.7	261.5
15°	280.2	280.7	279.7	277.4	274.4	271.6	267.8	264.7	262.0	259.9	258.2
17.5°	282.8	282.5	280.3	277.7	274.6	272.3	268.8	265.3	262.2	259.2	256.9
20°	286.6	284.8	281.7	278.4	275.2	273.2	270.4	267.3	264.0	259.7	256.7
22.5°	291.6	288.3	284.1	280.8	277.9	275.9	273.1	270.1	267.0	262.0	257.9
25°	298.7	293.4	288.6	285.1	282.5	280.5	277.0	273.9	270.4	265.5	260.2
27.5°	308.6	301.0	296.0	292.6	289.9	287.6	283.2	279.4	274.9	269.9	263.7
30°	321.5	312.2	306.8	303.8	301.0	297.7	292.9	287.3	281.5	274.9	268.1
32.5°	337.5	327.1	322.0	319.0	315.4	310.9	304.6	297.2	288.6	279.9	271.4
35°	360.3	348.4	342.8	337.6	332.4	325.8	316.3	305.6	294.2	282.8	272.4
37.5°	382.9	371.8	364.9	359.6	351.3	340.6	327.6	312.7	297.5	283.0	270.4
40°	414.9	402.0	393.9	384.5	371.2	354.5	335.5	315.5	296.7	279.2	264.3
42.5°	454.2	439.5	427.5	410.5	389.6	365.5	339.3	313.9	290.9	270.8	254.4
45°	503.9	484.7	464.6	437.9	406.0	372.3	339.1	308.1	281.0	258.2	242.0
47.5°	561.9	534.9	501.1	460.3	416.7	374.0	333.8	297.7	266.1	241.1	222.4
50°	621.5	582.5	534.4	477.6	422.2	369.8	322.1	280.7	246.7	218.1	198.0
52.5°	694.9	634.5	564.7	489.4	419.9	357.6	302.6	256.7	220.4	192.5	169.4
55°	782.4	694.3	593.4	495.8	409.6	335.7	273.1	225.4	187.2	161.8	141.0
57.5°	927.2	787.9	642.4	505.4	389.5	303.0	237.1	187.7	151.9	130.3	113.6
60°	1176.9	979.9	746.1	529.0	361.6	256.4	191.4	147.1	117.6	100.2	88.5
62.5°	1351.1	1096.3	801.9	520.9	314.2	201.9	141.5	105.2	85.7	74.3	66.4
65°	1317.2	1050.4	734.7	442.5	246.2	142.8	94.1	71.2	60.1	53.0	49.0
66°	1256.4	999.7	683.5	397.2	213.5	119.0	77.6	58.9	51.7	46.6	43.9
67.5°	1145.7	894.7	591.6	318.8	159.8	87.8	58.9	45.9	41.9	39.3	37.5
70°	948.5	707.5	407.3	188.4	84.5	49.2	37.5	33.8	32.0	30.9	30.7
72.5°	727.3	507.5	235.6	91.1	45.2	32.7	28.7	27.4	26.7	26.4	26.4
75°	449.3	286.3	105.3	45.7	31.2	26.7	24.9	24.3	24.1	24.1	24.1
77.5°	158.0	99.7	47.2	33.5	27.4	24.1	22.6	22.3	22.6	22.6	22.6
80°	43.6	38.5	34.2	29.7	24.8	22.3	21.0	20.8	21.5	21.6	21.0
82.5°	34.0	32.0	29.2	26.6	22.6	20.3	19.6	20.0	20.3	19.8	18.8
85°	29.1	27.7	20.5	20.5	18.3	17.7	17.5	17.8	17.7	16.3	15.0
87.5°	16.5	14.5	11.1	12.1	12.9	13.2	11.1	11.9	11.7	10.4	9.7
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: P146585  
 CATALOG NUMBER: LDRL-T3-F01-E

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	265.3	265.3	265.3	265.3	265.3
2.5°	267.8	267.8	268.1	268.1	268.0
5°	271.1	271.1	271.6	271.3	271.4
7.5°	270.4	269.8	269.8	269.5	269.3
10°	265.8	264.7	264.0	264.3	263.8
12.5°	260.5	259.5	258.9	258.7	258.6
15°	257.2	256.1	255.6	255.3	255.3
17.5°	255.4	254.1	253.4	252.9	252.8
20°	254.6	252.9	252.0	251.5	251.1
22.5°	254.9	252.9	251.6	251.0	250.6
25°	256.2	253.8	252.1	251.3	250.8
27.5°	258.6	255.3	253.4	252.3	251.6
30°	261.4	256.7	254.1	252.4	251.8
32.5°	263.2	256.9	253.6	251.1	250.5
35°	262.8	255.1	250.8	247.7	247.2
37.5°	259.5	250.3	245.0	240.9	240.4
40°	252.4	243.0	236.9	232.8	231.8
42.5°	242.5	232.8	226.2	222.4	221.1
45°	228.0	216.1	210.0	206.9	205.1
47.5°	207.5	196.3	189.5	186.9	184.6
50°	184.3	171.9	166.9	163.9	161.3
52.5°	156.8	146.3	142.5	139.7	137.5
55°	130.3	122.8	118.4	115.4	115.6
57.5°	104.7	100.2	97.7	94.6	94.9
60°	82.4	78.6	78.6	76.6	75.9
62.5°	62.9	61.4	60.9	60.3	59.1
65°	47.7	47.7	47.9	47.9	47.2
66°	42.9	43.4	44.1	44.1	43.3
67.5°	37.1	37.8	38.5	38.8	38.8
70°	30.7	31.5	31.9	32.2	32.0
72.5°	26.9	27.6	27.6	27.7	27.4
75°	24.4	24.8	24.9	24.6	24.4
77.5°	22.6	22.8	22.6	22.5	22.3
80°	20.5	20.3	19.8	19.2	19.0
82.5°	17.7	17.0	16.7	15.7	15.5
85°	14.2	13.4	12.7	11.4	10.7
87.5°	9.4	9.1	8.6	6.3	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)