

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: P146839

Luminaire Tested: **LDRL-T4-E01-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146839
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33696)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T4-E01-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (21) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2684 lumens
Efficiency: N/A
Efficacy: 108.7 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

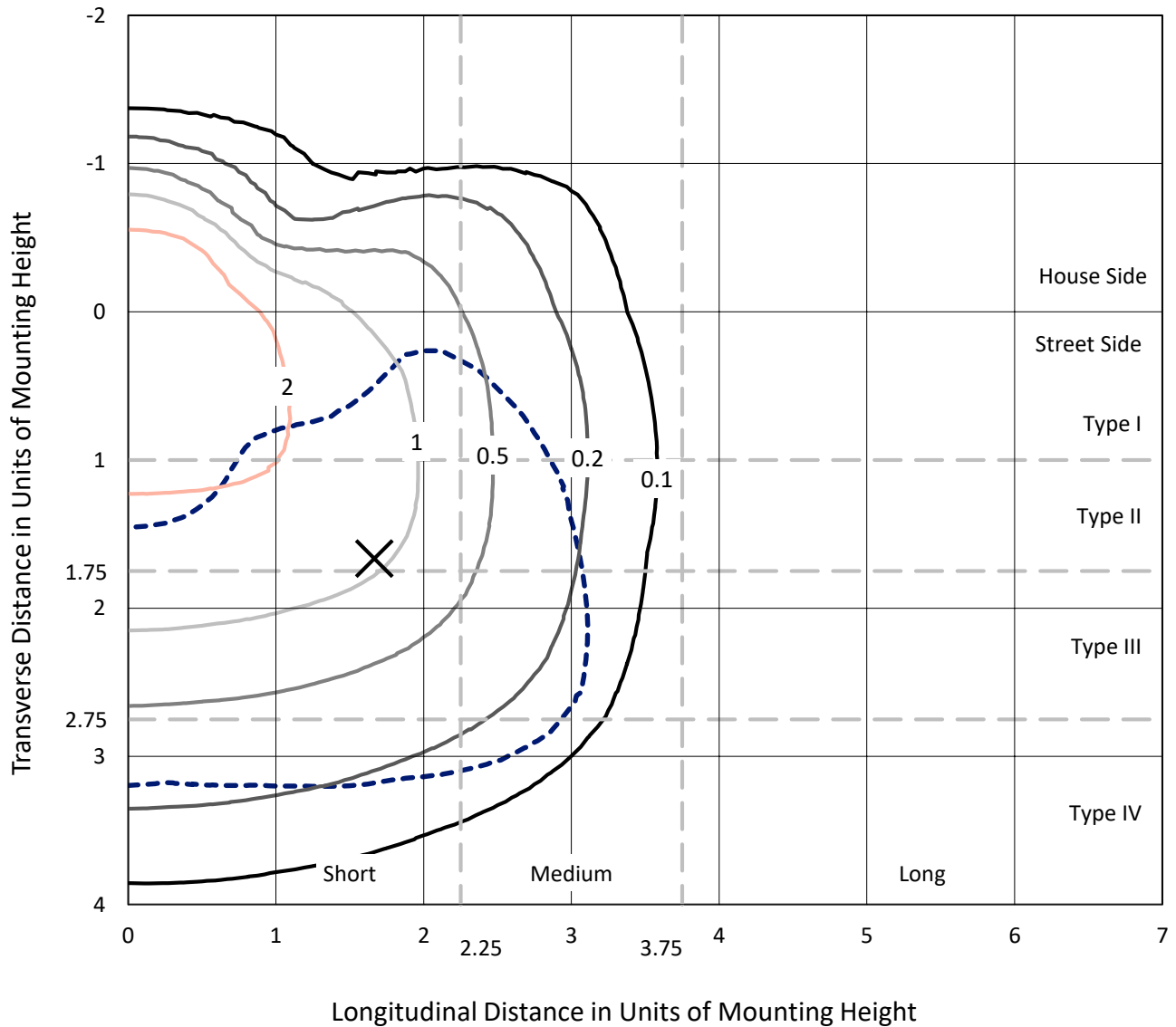
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

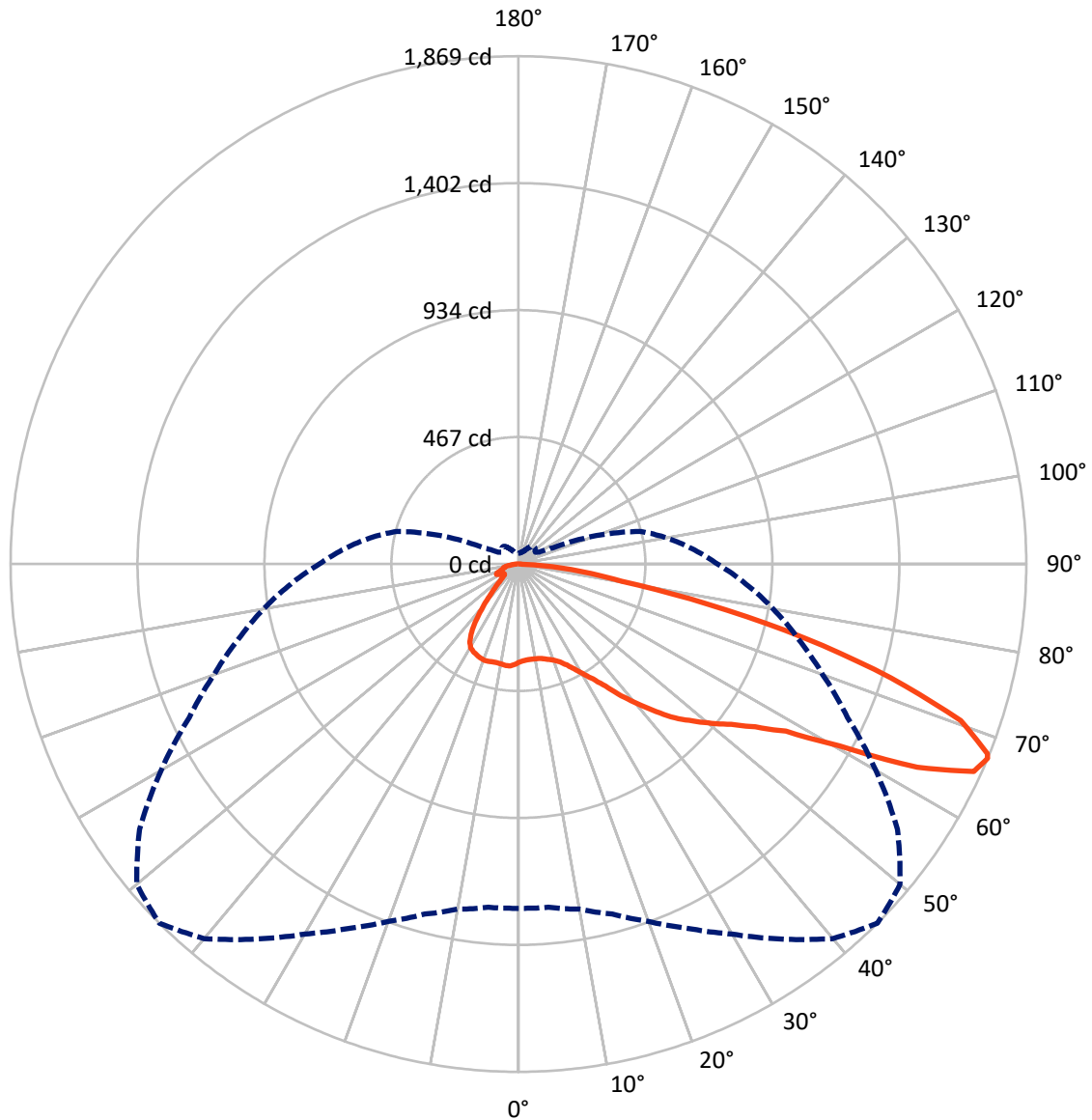
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	543.8	0.0	543.8
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	2140.1	0.0	2140.1
	% Fixture	79.7	0.0	79.7
Total	Lumens	2684.0	0.0	2684.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.8	1.3
10°-20°	104.6	3.9
20°-30°	177.7	6.6
30°-40°	267.1	10.0
40°-50°	347.3	12.9
50°-60°	476.8	17.8
60°-70°	752.2	28.0
70°-80°	454.5	16.9
80°-90°	68.9	2.6
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°	2684.0	100.0
0°-180°	2684.0	100.0



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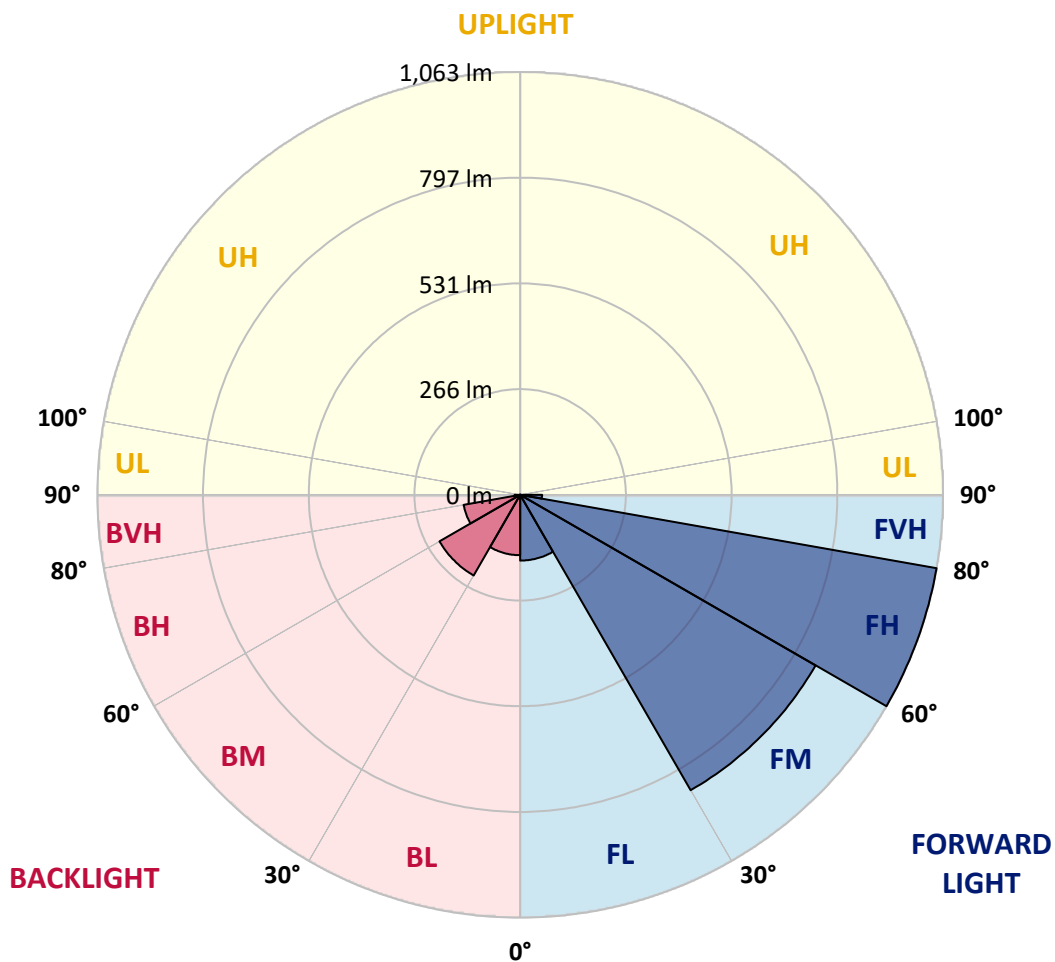
CATALOG NUMBER: LDRL-T4-E01-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	165.3	6.2			
FM	(30°-60°)	857.2	31.9			
FH	(60°-80°)	1062.6	39.6			G1/1800
FVH	(80°-90°)	55.0	2.0			G1/100
BL	(0°-30°)	151.8	5.7	B1/500		
BM	(30°-60°)	234.0	8.7	B1/1000		
BH	(60°-80°)	144.1	5.4	B1/500		G1/500
BVH	(80°-90°)	13.9	0.5			G1/100
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3
2.5°	353.3	354.0	353.5	353.5	353.6	353.8	354.2	354.9	355.1	356.2	356.4
5°	346.2	346.3	346.3	346.5	347.6	348.5	349.4	350.7	351.8	353.8	355.1
7.5°	343.6	344.3	344.2	344.5	345.6	346.5	347.6	349.4	352.2	353.8	355.7
10°	347.8	348.4	347.8	348.0	348.2	349.1	349.4	350.7	352.9	354.4	356.0
12.5°	357.5	357.5	356.9	356.6	356.0	356.2	355.5	355.3	356.4	356.6	356.8
15°	370.3	371.7	369.9	368.4	367.7	367.0	364.6	363.7	363.5	361.9	360.2
17.5°	383.2	383.6	382.5	380.9	379.8	378.1	376.1	374.3	372.1	369.5	366.3
20°	397.7	397.9	396.4	394.0	392.7	390.7	388.2	385.1	382.3	378.3	374.7
22.5°	417.8	417.6	414.7	412.7	410.8	408.5	404.8	400.6	396.2	391.5	386.3
25°	440.8	440.8	438.8	435.5	434.6	431.1	427.1	422.2	417.6	410.8	404.6
27.5°	467.1	467.3	463.6	461.8	459.8	456.1	453.4	449.6	443.3	436.6	430.2
30°	498.3	497.4	494.5	490.7	489.9	487.0	483.2	480.4	472.8	468.0	460.9
32.5°	527.9	529.4	528.6	524.3	525.0	522.1	518.8	516.8	508.7	504.2	497.6
35°	572.1	573.4	574.5	572.9	573.8	572.1	569.4	564.1	557.5	551.5	542.3
37.5°	606.5	607.7	608.5	612.5	618.3	624.0	626.6	623.8	624.2	615.1	602.8
40°	634.6	637.7	642.1	649.8	661.4	672.2	678.1	682.6	685.0	676.4	660.5
42.5°	662.7	666.0	672.0	684.3	700.4	715.9	728.1	742.2	744.7	742.6	729.0
45°	692.1	696.0	703.5	717.3	736.2	756.4	776.2	796.1	806.1	807.8	791.3
47.5°	727.6	733.1	740.0	755.7	774.0	796.8	821.5	847.0	862.8	862.8	843.8
50°	771.8	778.0	783.8	799.5	817.8	841.4	869.9	898.4	919.7	921.0	898.0
52.5°	833.7	834.6	838.1	852.5	868.4	894.7	921.8	954.8	979.5	980.6	954.1
55°	909.0	909.0	913.0	925.0	939.8	961.6	989.5	1026.2	1052.2	1057.8	1023.9
57.5°	1008.0	1011.6	1013.6	1027.7	1037.7	1060.8	1084.1	1124.2	1157.2	1160.9	1126.3
60°	1169.1	1162.1	1173.3	1185.7	1209.3	1226.1	1265.9	1306.1	1348.3	1358.3	1321.3
62.5°	1327.8	1335.3	1349.0	1371.5	1411.9	1449.5	1506.5	1567.5	1633.1	1646.6	1618.3
65°	1337.7	1342.3	1361.3	1400.0	1455.1	1522.2	1600.7	1692.6	1790.3	1840.9	1793.5
67°	1266.8	1268.1	1289.7	1333.7	1399.8	1479.3	1572.2	1684.4	1799.1	1868.7	1833.3
67.5°	1244.3	1246.7	1267.9	1312.8	1379.7	1461.0	1555.8	1671.1	1788.5	1861.2	1829.3
70°	1112.5	1112.5	1135.3	1180.6	1243.3	1322.5	1421.7	1538.1	1665.8	1727.0	1699.7
72.5°	947.0	940.9	966.7	1001.0	1052.2	1121.4	1201.2	1293.1	1389.2	1433.8	1423.0
75°	688.3	699.6	713.0	738.4	782.7	837.4	884.1	966.1	1041.6	1090.9	1077.9
77.5°	375.6	380.0	416.9	432.0	470.9	511.5	562.8	620.3	679.7	710.8	698.2
80°	223.2	231.8	253.7	271.8	292.8	323.7	361.0	373.6	385.3	384.5	361.7
82.5°	141.0	151.4	175.2	190.7	201.7	219.6	239.8	255.7	259.2	242.0	215.6
85°	22.8	37.8	98.8	116.2	123.1	132.8	147.8	154.5	144.3	126.0	130.6
87.5°	9.0	10.8	30.1	38.2	40.4	21.2	36.7	43.1	21.9	11.1	25.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3
2.5°	357.5	358.4	359.3	360.4	360.8	361.7	363.3	363.1	364.4	365.0	365.9
5°	356.8	358.8	360.2	362.2	363.0	365.0	367.2	367.9	369.5	370.8	371.9
7.5°	358.2	360.4	362.2	364.6	366.3	367.9	369.5	371.6	373.0	373.9	374.7
10°	358.8	361.1	363.3	365.3	367.2	368.4	370.3	371.9	373.4	373.9	374.1
12.5°	358.9	360.6	362.8	365.0	366.6	368.3	369.5	371.4	372.5	372.6	372.3
15°	360.4	360.6	362.1	364.6	366.3	367.9	368.8	369.7	370.5	369.9	369.4
17.5°	364.8	363.5	363.5	364.8	365.7	366.4	366.6	366.4	365.7	364.6	363.7
20°	371.9	369.4	367.3	366.6	365.2	363.3	361.0	358.8	356.0	354.7	354.6
22.5°	383.1	379.2	375.6	371.9	367.2	361.9	356.4	351.6	347.8	345.8	346.0
25°	402.1	396.4	392.2	385.8	378.1	370.6	363.5	357.1	352.6	348.9	349.6
27.5°	427.6	421.2	417.6	410.3	401.5	392.0	383.6	374.8	368.3	363.7	364.6
30°	457.6	455.8	449.7	442.4	434.2	423.4	410.8	397.7	385.8	378.3	376.8
32.5°	493.8	491.7	485.2	479.0	468.4	456.5	440.1	419.2	400.6	386.3	380.1
35°	538.3	533.4	525.4	519.3	507.5	492.1	470.9	442.8	414.5	393.1	377.6
37.5°	593.9	581.6	568.3	552.6	535.0	516.4	491.9	459.0	424.0	393.7	366.1
40°	646.8	627.1	605.0	580.2	558.8	536.3	510.9	473.3	430.4	389.8	348.7
42.5°	705.8	675.1	645.2	611.0	582.9	556.2	527.2	483.3	431.6	379.4	326.2
45°	762.6	723.2	683.0	640.8	605.0	575.4	542.3	491.9	431.3	368.4	304.0
47.5°	813.2	766.1	716.4	668.9	627.3	594.8	558.6	503.6	436.2	365.3	289.2
50°	860.6	806.1	747.9	695.1	649.8	616.5	579.2	522.1	451.4	372.5	287.0
52.5°	909.3	850.1	783.5	726.7	679.3	640.8	603.2	545.6	472.6	387.1	291.9
55°	972.9	904.9	833.9	770.9	716.6	675.1	631.7	574.1	495.4	404.1	301.2
57.5°	1067.5	988.1	907.3	839.6	776.9	725.2	677.5	611.6	533.2	429.6	321.7
60°	1237.4	1149.4	1055.8	967.2	895.1	834.6	774.0	692.1	603.0	487.7	368.6
62.5°	1514.9	1393.0	1263.7	1147.2	1048.0	966.1	880.7	782.4	678.4	558.2	439.7
65°	1681.7	1513.6	1349.0	1213.8	1096.6	991.7	888.3	782.7	682.1	577.1	471.7
67°	1702.3	1518.0	1335.9	1191.9	1066.2	952.1	839.9	732.0	641.9	553.9	462.9
67.5°	1696.1	1509.2	1323.4	1178.0	1051.1	940.6	830.2	719.7	632.0	544.0	456.3
70°	1573.7	1390.8	1207.1	1065.7	944.0	831.0	726.7	616.0	548.2	485.2	409.4
72.5°	1306.1	1163.4	1009.4	891.6	786.6	688.7	597.0	504.4	449.9	405.3	352.0
75°	968.5	837.7	707.5	636.6	555.1	476.8	405.9	337.4	316.4	305.8	274.4
77.5°	598.1	480.6	382.5	318.4	253.2	198.4	157.8	128.4	133.9	155.8	165.9
80°	297.8	219.9	170.2	135.4	109.4	88.4	64.8	47.5	56.8	67.4	76.4
82.5°	179.2	141.6	112.0	94.8	77.1	59.6	42.2	32.1	35.6	47.9	52.6
85°	111.2	89.1	71.2	59.6	49.3	36.5	23.9	23.7	25.2	31.8	36.4
87.5°	32.7	22.1	17.5	18.3	20.3	16.8	12.6	10.8	13.3	18.3	20.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3
2.5°	366.1	367.3	367.9	368.1	368.3	369.4	369.4	370.5	370.8	370.8	371.2
5°	373.0	374.3	374.8	375.0	375.4	375.9	375.8	376.5	376.8	376.7	376.7
7.5°	375.6	375.9	375.9	376.5	377.0	376.5	376.1	376.5	376.3	376.5	376.5
10°	374.7	374.3	374.3	373.9	374.5	373.4	373.4	373.7	373.6	373.9	374.5
12.5°	372.5	372.3	371.7	371.6	372.3	371.6	371.7	372.3	372.6	373.4	374.3
15°	369.4	368.8	368.8	369.5	371.4	371.9	372.6	373.6	373.7	374.1	374.5
17.5°	364.1	365.0	367.2	369.7	373.2	374.5	374.8	374.3	372.5	371.0	369.5
20°	356.8	360.8	366.4	371.9	376.1	375.9	373.6	370.1	365.7	362.6	360.6
22.5°	350.5	358.4	367.2	373.7	376.5	373.0	367.5	362.2	357.1	352.6	348.5
25°	354.9	362.4	369.9	373.9	373.7	367.7	360.4	354.6	347.6	341.2	334.5
27.5°	369.2	373.7	375.9	374.7	370.8	362.8	354.7	346.5	337.6	329.9	322.0
30°	378.9	378.9	376.7	371.6	364.8	355.8	346.0	335.4	324.8	315.8	306.9
32.5°	375.8	368.6	362.2	355.3	347.6	337.9	326.6	315.1	303.0	292.6	285.0
35°	362.2	346.9	333.6	323.7	315.7	304.1	291.0	277.8	268.0	260.9	256.5
37.5°	338.1	313.6	294.3	282.2	269.8	257.9	242.8	236.7	228.0	223.6	221.9
40°	308.9	273.1	248.8	233.3	220.1	205.3	195.1	191.3	188.0	187.1	186.3
42.5°	275.3	230.5	201.7	185.6	169.7	158.9	154.4	152.0	151.4	151.4	152.3
45°	240.4	187.2	154.0	141.0	127.9	122.2	121.1	120.0	120.2	119.6	120.0
47.5°	213.4	150.3	116.2	104.3	97.5	95.7	94.4	94.1	94.1	93.2	92.1
50°	199.3	125.7	91.2	81.8	78.0	76.7	76.7	76.0	74.5	73.6	71.2
52.5°	195.6	112.9	78.9	70.9	67.6	66.5	65.4	64.3	62.1	60.1	57.4
55°	198.6	108.9	75.1	67.6	63.9	62.7	61.7	59.9	56.8	53.9	50.8
57.5°	210.8	111.4	76.5	68.5	65.2	64.3	63.4	60.6	56.8	52.6	49.1
60°	244.2	123.5	82.7	73.4	70.7	70.9	69.6	66.1	60.6	54.6	49.5
62.5°	287.3	140.3	90.8	80.4	80.0	81.8	81.8	75.8	66.9	57.7	50.8
65°	312.0	145.6	91.9	81.3	84.4	89.7	89.3	81.3	69.0	57.7	50.2
67°	305.8	139.9	87.3	76.0	79.6	85.7	84.9	77.3	65.8	55.3	48.8
67.5°	300.9	138.1	86.2	74.7	78.4	83.3	83.3	75.6	64.3	54.6	48.2
70°	264.9	122.0	80.7	69.8	69.8	71.1	70.1	64.7	57.0	50.2	46.0
72.5°	220.8	106.7	76.4	66.3	62.8	62.1	60.8	57.0	52.1	47.3	43.7
75°	171.2	94.4	72.9	62.7	58.1	56.4	55.2	52.2	48.4	44.4	41.3
77.5°	119.8	80.9	68.3	59.6	54.6	53.3	51.3	48.0	44.9	41.5	38.5
80°	74.3	66.9	59.6	53.7	48.6	46.8	44.2	41.3	38.7	36.7	34.5
82.5°	53.0	49.1	44.4	41.3	36.0	30.5	32.7	32.9	31.2	30.0	29.4
85°	35.4	32.0	29.6	26.9	23.7	21.4	21.9	23.6	23.7	23.2	23.2
87.5°	19.4	16.4	15.9	16.4	14.2	13.5	13.7	15.2	15.3	15.3	15.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: LDRL-T4-E01-E-7030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	361.3	361.3	361.3	361.3
2.5°	371.4	371.9	371.7	372.1
5°	377.0	377.4	377.2	377.4
7.5°	376.1	376.8	377.2	376.7
10°	374.7	375.8	376.5	376.5
12.5°	375.0	376.8	377.9	377.9
15°	374.7	376.1	376.5	376.5
17.5°	369.0	369.0	369.2	368.4
20°	359.1	358.0	357.7	356.4
22.5°	345.1	342.5	340.9	339.9
25°	329.0	325.0	322.4	321.0
27.5°	315.7	312.2	309.6	308.2
30°	300.9	296.8	295.4	294.3
32.5°	279.5	275.6	274.6	273.6
35°	251.7	250.4	247.5	245.5
37.5°	219.6	217.9	216.8	216.1
40°	186.0	186.1	185.2	183.6
42.5°	152.3	154.2	152.3	152.0
45°	119.6	121.7	121.7	122.2
47.5°	92.2	91.9	92.6	92.8
50°	69.8	68.7	68.3	67.8
52.5°	55.3	54.1	53.3	52.4
55°	48.8	47.3	46.6	46.4
57.5°	46.6	44.8	43.7	43.5
60°	46.0	43.5	42.0	41.6
62.5°	46.0	42.9	41.3	40.7
65°	45.5	42.4	40.9	40.4
67°	44.8	42.0	40.6	40.2
67.5°	44.4	41.8	40.6	40.0
70°	43.5	41.3	39.8	39.3
72.5°	41.5	39.6	38.2	37.8
75°	39.3	37.6	36.7	36.4
77.5°	36.7	35.3	34.2	33.2
80°	32.9	31.2	29.6	29.2
82.5°	27.9	26.1	24.8	24.7
85°	22.5	21.0	19.5	19.5
87.5°	15.7	14.8	13.9	13.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)