

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: P145434

Luminaire Tested: **LDRL-SL4-F02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145434
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-F02-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4346.1 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

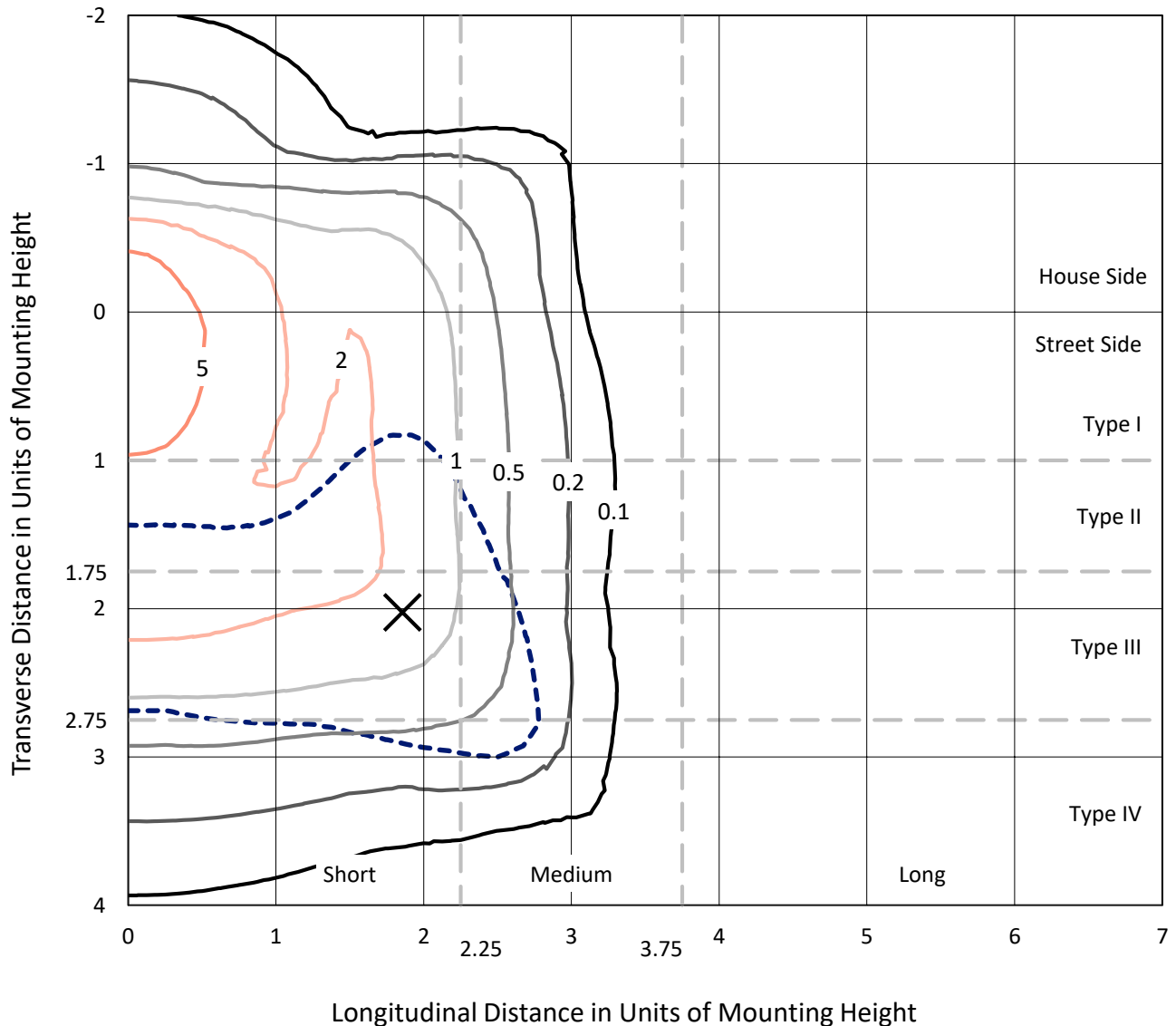
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

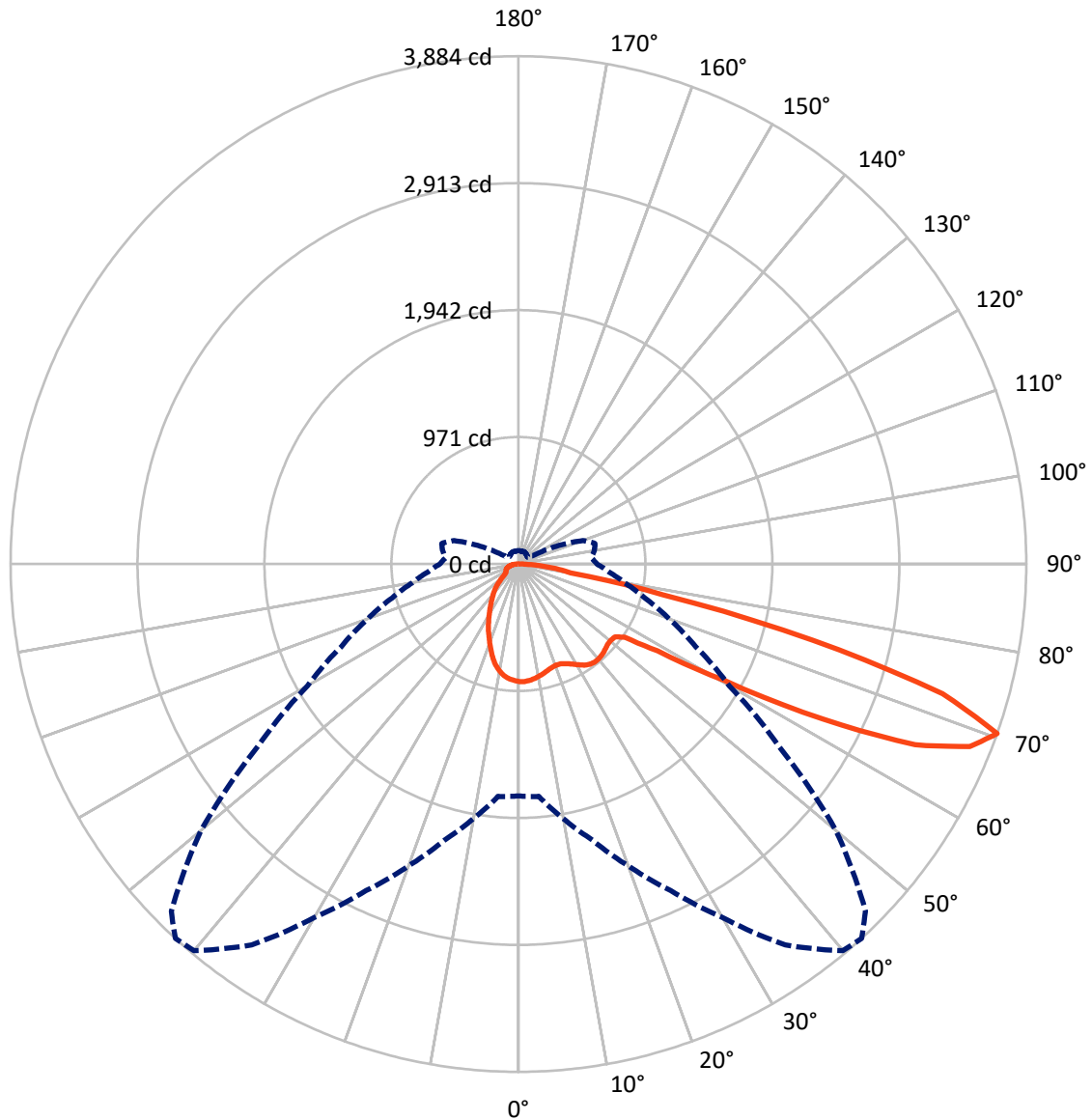


Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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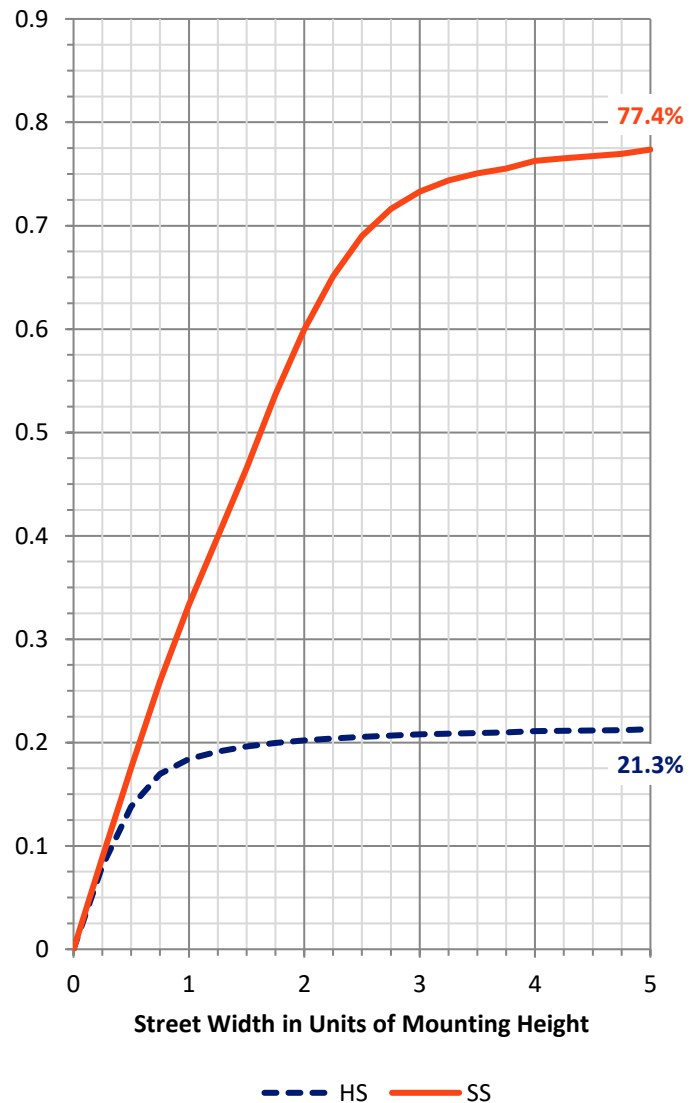
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	938.8	0.0	938.8
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	3407.2	0.0	3407.2
	% Fixture	78.4	0.0	78.4
Total	Lumens	4346.1	0.0	4346.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	1.9
10°-20°	225.3	5.2
20°-30°	328.6	7.6
30°-40°	419.1	9.6
40°-50°	489.2	11.3
50°-60°	748.1	17.2
60°-70°	1356.0	31.2
70°-80°	602.9	13.9
80°-90°	93.3	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°	4346.1	100.0
0°-180°	4346.1	100.0



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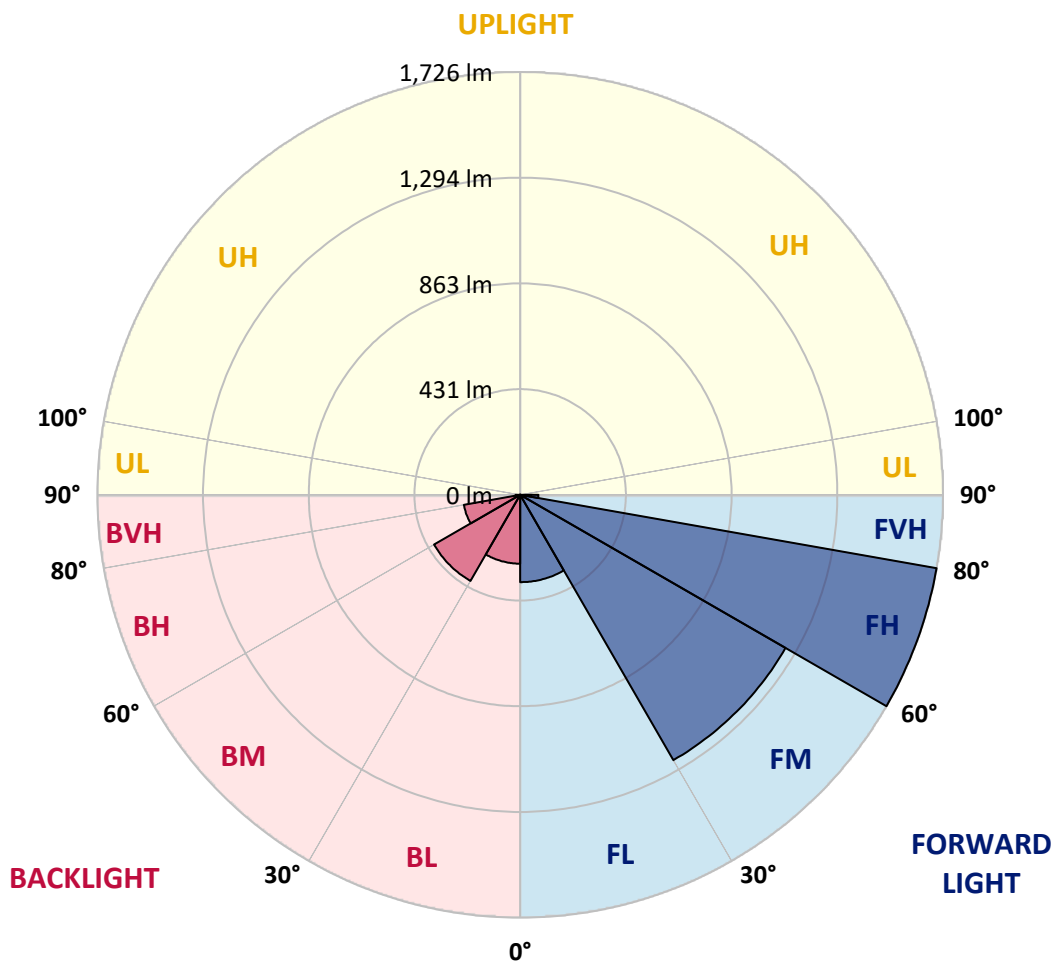
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	356.5	8.2			
FM	(30°-60°)	1250.5	28.8			
FH	(60°-80°)	1725.7	39.7			G1/1800
FVH	(80°-90°)	74.5	1.7			G1/100
BL	(0°-30°)	281.0	6.5	B1/500		
BM	(30°-60°)	405.8	9.3	B1/1000		
BH	(60°-80°)	233.2	5.4	B1/500		G1/500
BVH	(80°-90°)	18.8	0.4			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°	42.5°	45°
0°	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8
2.5°	903.0	902.1	902.7	903.3	903.3	903.6	900.9	901.2	900.0	900.3	900.6
5°	899.7	898.8	899.4	899.4	899.4	899.1	895.4	895.1	893.6	893.6	893.0
7.5°	893.3	890.0	891.8	892.1	891.5	890.0	887.9	885.8	884.9	884.9	882.8
10°	883.7	880.1	881.0	881.6	881.3	878.3	877.3	875.2	872.8	871.9	869.5
12.5°	871.3	868.9	870.1	869.8	869.8	867.1	865.6	862.6	859.6	858.0	855.0
15°	863.5	860.5	861.7	861.7	860.5	857.7	855.6	850.2	845.1	843.3	839.3
17.5°	868.3	865.3	866.5	865.6	863.5	857.7	852.3	843.6	835.4	830.6	825.5
20°	887.6	884.6	885.5	884.9	881.9	872.5	862.6	847.5	832.4	825.2	817.3
22.5°	918.4	916.0	917.5	916.6	911.7	899.7	884.9	863.2	840.6	829.7	818.5
25°	963.9	963.3	965.7	963.0	956.1	938.0	916.6	887.3	857.7	844.2	828.5
27.5°	1018.8	1013.7	1017.3	1014.9	1010.0	987.1	958.2	921.1	883.4	865.6	846.9
30°	1068.3	1063.7	1070.4	1069.2	1061.9	1038.4	1001.9	958.5	916.0	893.3	871.9
32.5°	1125.6	1119.8	1125.0	1125.0	1114.1	1082.4	1040.8	991.0	946.4	922.3	896.6
35°	1185.6	1179.5	1184.4	1182.9	1163.6	1121.6	1069.5	1015.5	966.3	941.6	915.3
37.5°	1241.4	1240.5	1241.7	1231.7	1204.9	1151.2	1088.8	1028.4	976.3	950.3	922.9
40°	1297.2	1295.1	1289.9	1272.4	1233.2	1168.7	1098.7	1033.0	976.9	949.7	922.0
42.5°	1332.2	1328.2	1319.5	1295.7	1246.5	1172.9	1095.7	1026.0	969.6	941.9	914.7
45°	1344.2	1340.3	1329.7	1302.9	1246.8	1166.3	1083.9	1012.2	956.1	930.7	903.3
47.5°	1334.3	1331.9	1322.2	1295.4	1237.2	1153.9	1069.2	998.3	943.1	918.4	892.7
50°	1317.4	1315.9	1307.4	1282.7	1228.1	1146.4	1062.2	991.7	939.5	916.6	892.4
52.5°	1359.6	1355.1	1340.0	1310.7	1247.1	1159.9	1073.1	1001.6	947.9	924.7	900.0
55°	1878.7	1845.2	1770.4	1630.1	1433.8	1281.5	1153.3	1067.1	1009.1	986.5	963.0
57.5°	2470.7	2435.7	2404.6	2297.6	2064.4	1776.7	1517.9	1366.5	1262.8	1252.8	1243.5
60°	2698.7	2709.9	2707.1	2667.3	2547.9	2411.3	2194.7	2015.9	1817.7	1809.6	1821.3
62.5°	2855.8	2865.2	2866.4	2854.3	2815.4	2769.9	2724.6	2667.3	2629.6	2613.3	2508.1
65°	2920.7	2934.2	2964.1	2986.4	2992.8	3008.4	3049.5	3205.4	3335.4	3334.5	3211.1
67.5°	2673.1	2689.3	2802.4	2913.4	3006.6	3114.6	3280.8	3534.4	3730.2	3724.1	3623.1
70°	1774.0	1784.3	1976.4	2185.4	2456.5	2756.3	3119.4	3556.7	3860.1	3884.0	3753.7
72.5°	1088.2	1111.7	1174.4	1259.2	1403.9	1681.7	2221.6	2968.9	3414.1	3391.8	3288.0
75°	734.7	735.9	734.1	743.1	751.3	807.4	1024.8	1632.5	2312.6	2324.7	2280.1
77.5°	502.2	508.8	512.4	510.0	518.1	515.7	528.4	559.5	886.4	1131.3	1039.6
80°	438.8	441.5	445.5	439.7	424.6	416.2	428.0	416.8	392.7	405.6	388.5
82.5°	277.8	285.9	286.8	306.7	336.3	337.5	352.6	341.4	310.6	290.4	265.7
85°	199.7	202.7	208.1	209.3	199.1	190.3	195.7	186.4	168.0	157.1	139.0
87.5°	116.4	119.4	124.9	121.5	111.3	98.6	89.0	76.6	60.6	56.7	50.1
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8
2.5°	900.9	899.4	898.2	897.6	898.8	897.6	896.3	895.7	894.5	894.8	893.3
5°	892.4	890.3	888.5	887.0	888.2	886.1	884.3	883.1	881.6	881.3	879.8
7.5°	880.7	877.3	874.9	872.2	869.2	867.4	865.3	863.2	859.9	859.6	858.9
10°	865.3	862.6	857.7	853.5	849.3	844.8	840.3	836.9	833.0	831.5	829.4
12.5°	849.9	844.5	838.7	832.1	827.0	819.7	813.7	807.4	801.6	798.0	794.1
15°	831.8	826.1	817.9	811.6	804.4	796.2	788.4	779.0	769.7	763.9	758.5
17.5°	816.1	808.9	802.2	793.2	786.0	776.6	764.9	754.9	743.7	734.4	724.4
20°	804.1	795.9	788.1	779.9	771.2	760.6	747.7	733.5	719.3	706.0	691.3
22.5°	799.2	786.3	777.5	770.0	760.9	748.9	734.4	716.9	699.4	682.5	665.3
25°	803.5	784.2	770.6	762.1	754.0	741.6	725.3	705.4	684.9	663.5	643.0
27.5°	814.9	790.5	771.2	757.9	748.6	736.5	718.4	697.6	674.4	650.2	628.2
30°	831.5	801.0	776.9	757.9	744.0	730.2	710.6	687.0	662.6	637.3	612.5
32.5°	849.6	812.8	783.9	758.8	737.4	719.9	699.4	676.5	650.5	623.7	597.2
35°	863.2	821.2	786.9	755.5	728.1	706.0	684.0	661.7	636.4	609.2	582.7
37.5°	868.9	824.6	786.3	748.6	715.1	691.0	668.0	645.7	621.3	595.7	571.2
40°	869.2	824.6	782.6	739.2	701.5	675.3	651.1	630.3	607.4	585.4	563.7
42.5°	863.5	820.3	776.0	730.5	691.6	662.0	637.3	615.9	597.5	577.9	559.5
45°	853.2	811.9	770.0	725.6	687.9	658.7	632.1	611.9	595.4	577.9	561.9
47.5°	845.4	807.1	770.3	732.6	696.7	666.5	637.9	616.5	602.3	588.4	577.0
50°	846.9	808.9	773.9	738.0	702.7	672.3	644.5	626.1	617.7	613.1	610.4
52.5°	854.7	816.1	789.6	765.8	754.3	735.6	720.2	706.3	708.5	697.6	683.7
55°	935.6	922.6	953.0	975.1	985.9	1004.9	1032.4	1006.1	1002.5	969.0	869.5
57.5°	1256.2	1286.9	1333.7	1366.8	1370.2	1364.4	1341.8	1320.1	1284.8	1234.4	1095.1
60°	1793.9	1786.7	1743.2	1685.0	1639.8	1580.4	1520.7	1470.3	1413.6	1336.4	1188.0
62.5°	2359.4	2185.1	2030.4	1898.6	1786.7	1687.4	1597.3	1521.6	1443.7	1332.8	1174.7
65°	2816.0	2480.6	2208.0	1996.0	1829.5	1689.2	1572.8	1468.5	1364.4	1235.9	1082.7
67.5°	3142.3	2610.3	2198.9	1900.7	1667.2	1474.2	1304.7	1185.9	1079.1	978.1	909.0
70°	3168.3	2430.9	1860.3	1495.3	1226.0	999.2	823.4	693.7	600.8	558.9	588.7
72.5°	2707.4	1798.4	1236.9	915.3	726.5	564.6	453.9	362.8	288.0	251.2	256.4
75°	1594.5	863.5	557.1	415.0	339.0	270.8	234.3	197.8	174.6	139.9	111.9
77.5°	607.1	375.5	281.1	233.4	166.5	119.7	94.4	81.4	74.8	73.9	70.0
80°	349.9	275.4	192.7	126.1	92.3	78.1	67.0	57.3	53.4	52.5	54.0
82.5°	221.1	171.6	105.9	81.1	67.3	57.9	48.3	41.9	38.6	37.4	39.5
85°	114.3	86.0	64.5	55.5	51.6	47.0	38.6	32.3	32.0	33.5	38.6
87.5°	42.2	36.8	29.0	25.0	26.8	25.0	18.1	15.7	14.2	18.7	27.1
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8	898.8
2.5°	893.3	892.7	893.0	892.4	892.4	893.3	892.1	891.2	892.7	892.7	893.6
5°	879.5	880.1	880.1	879.8	880.4	881.9	881.6	881.6	884.0	884.9	886.1
7.5°	857.4	858.3	858.6	859.6	859.9	862.0	863.5	865.3	868.9	869.8	872.5
10°	827.6	827.0	829.1	828.8	831.5	833.3	834.5	838.4	843.9	846.9	849.6
12.5°	792.3	792.3	793.5	793.8	796.2	798.6	800.1	805.0	809.5	813.4	819.4
15°	754.9	753.7	751.0	750.7	751.6	754.0	757.3	760.9	767.9	773.6	778.7
17.5°	715.7	712.1	708.8	704.5	704.2	703.9	705.7	708.5	719.3	725.0	732.3
20°	681.0	673.2	665.3	656.6	651.5	649.0	649.9	653.6	663.8	671.4	678.9
22.5°	649.9	638.2	625.8	611.9	603.5	598.4	599.0	600.5	608.0	612.5	616.5
25°	623.4	607.1	589.9	572.1	560.4	552.5	552.2	552.2	548.9	549.5	547.4
27.5°	605.3	582.7	560.7	539.9	524.5	516.6	506.1	498.5	491.9	482.9	478.9
30°	587.8	564.6	539.6	516.6	498.2	482.9	463.3	447.0	434.0	421.6	411.1
32.5°	572.1	548.0	524.2	499.1	473.8	447.3	421.6	402.9	384.5	365.5	352.9
35°	558.3	535.6	511.8	483.5	447.9	413.2	384.2	358.9	337.2	314.3	295.9
37.5°	550.4	529.9	505.2	466.6	421.9	382.4	350.2	321.8	292.9	265.4	242.8
40°	546.5	528.4	498.2	449.4	398.7	356.5	320.6	286.5	252.4	220.2	196.6
42.5°	545.9	528.4	488.0	431.9	378.8	333.6	293.5	252.4	211.1	179.8	158.9
45°	551.3	527.8	477.1	416.2	361.0	313.1	264.8	216.5	174.0	146.6	135.1
47.5°	567.0	529.9	468.7	402.9	344.1	290.4	232.2	176.7	140.5	128.2	127.9
50°	592.3	539.6	466.9	393.3	327.5	262.1	193.9	141.4	124.0	123.4	126.7
52.5°	632.4	557.7	471.4	386.6	307.6	225.3	153.5	122.1	118.8	122.1	126.4
55°	720.8	589.9	477.4	374.9	275.4	178.5	126.4	115.8	117.3	121.2	125.2
57.5°	881.6	656.9	483.8	348.3	223.2	137.2	113.7	113.4	116.1	119.4	123.1
60°	983.5	739.5	499.1	309.1	168.6	113.4	108.9	111.9	115.2	117.6	120.6
62.5°	986.8	761.2	507.3	267.2	125.5	103.7	104.7	110.4	114.3	115.2	116.7
65°	923.2	720.2	470.5	217.5	104.1	98.3	101.6	106.8	110.7	111.3	112.5
67.5°	806.5	635.2	398.7	164.1	94.7	94.1	97.7	101.6	104.4	106.8	108.6
70°	607.4	524.2	320.6	127.3	89.0	88.4	92.0	95.3	97.7	100.7	103.7
72.5°	307.9	362.8	243.1	104.1	81.1	81.7	85.7	88.7	90.5	93.2	96.2
75°	105.0	158.3	153.8	84.1	72.4	74.8	76.6	79.9	82.6	84.4	86.0
77.5°	65.7	68.8	79.3	67.9	63.9	64.5	67.6	70.6	73.6	74.8	75.4
80°	54.9	55.2	55.5	54.3	54.6	56.4	58.2	61.5	64.5	65.1	65.4
82.5°	43.4	46.4	46.1	45.8	47.4	49.2	50.4	51.6	52.8	53.4	54.3
85°	38.3	37.7	38.0	38.9	37.7	36.5	36.2	36.2	38.0	40.1	41.0
87.5°	35.0	29.9	22.3	21.1	21.1	20.5	19.3	19.3	21.1	22.9	23.8
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-SL4-F02-E-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	898.8	898.8	898.8	898.8	898.8
2.5°	893.3	893.6	893.3	893.3	894.8
5°	886.7	887.9	887.3	888.2	889.1
7.5°	873.1	876.1	876.7	879.2	878.3
10°	853.5	855.6	858.6	861.1	860.2
12.5°	822.5	827.6	832.1	834.8	834.2
15°	782.9	790.2	796.2	798.3	795.9
17.5°	740.7	745.2	752.5	754.0	756.4
20°	687.3	687.0	693.4	693.4	692.2
22.5°	617.7	622.2	622.2	618.0	615.9
25°	546.5	548.0	543.5	544.4	538.7
27.5°	475.0	471.1	467.5	469.0	464.8
30°	406.9	398.4	394.8	395.4	390.9
32.5°	341.4	331.5	327.8	323.0	319.1
35°	282.0	266.3	257.0	254.5	257.3
37.5°	223.8	212.6	201.5	193.3	194.2
40°	177.0	165.6	158.3	155.0	154.4
42.5°	146.3	139.6	138.1	138.4	138.4
45°	132.7	133.0	134.2	135.4	135.7
47.5°	130.0	131.8	133.9	135.4	135.7
50°	129.7	131.5	133.0	134.8	135.4
52.5°	129.4	130.6	131.5	132.4	133.3
55°	128.2	128.8	128.5	129.1	130.0
57.5°	125.2	125.5	124.9	125.2	127.0
60°	122.4	122.8	121.5	123.1	123.4
62.5°	119.1	118.8	118.2	119.1	119.1
65°	114.3	112.5	113.1	114.0	114.3
67.5°	108.6	106.8	106.8	107.4	108.3
70°	101.3	100.4	100.4	101.6	102.8
72.5°	93.2	93.8	95.6	97.4	99.2
75°	86.6	88.1	89.9	94.4	97.1
77.5°	78.1	78.4	79.9	84.4	89.3
80°	66.4	66.0	66.4	67.0	67.9
82.5°	52.5	51.9	50.1	50.7	49.5
85°	38.6	37.7	35.6	34.1	33.8
87.5°	22.3	22.3	21.4	20.2	19.0
90°	0.0	0.0	0.0	0.0	0.0

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