

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: P163528

Luminaire Tested: **LDRL-SL3-E03-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163528
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL3-E03-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (63) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5177.1 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

Input Watts (W): 75.2
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

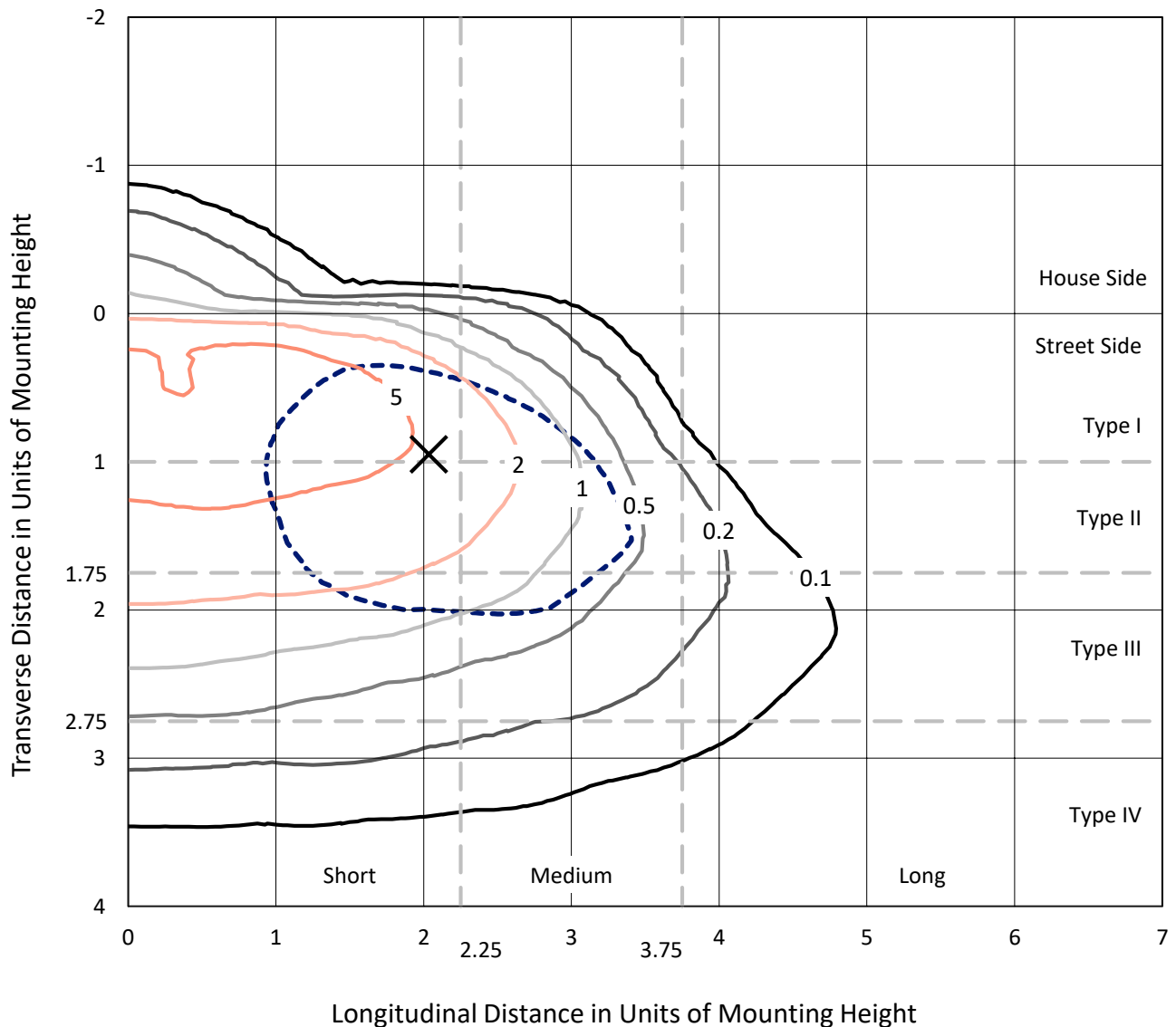


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Iso-Footcandle Lines of Horizontal Illumination

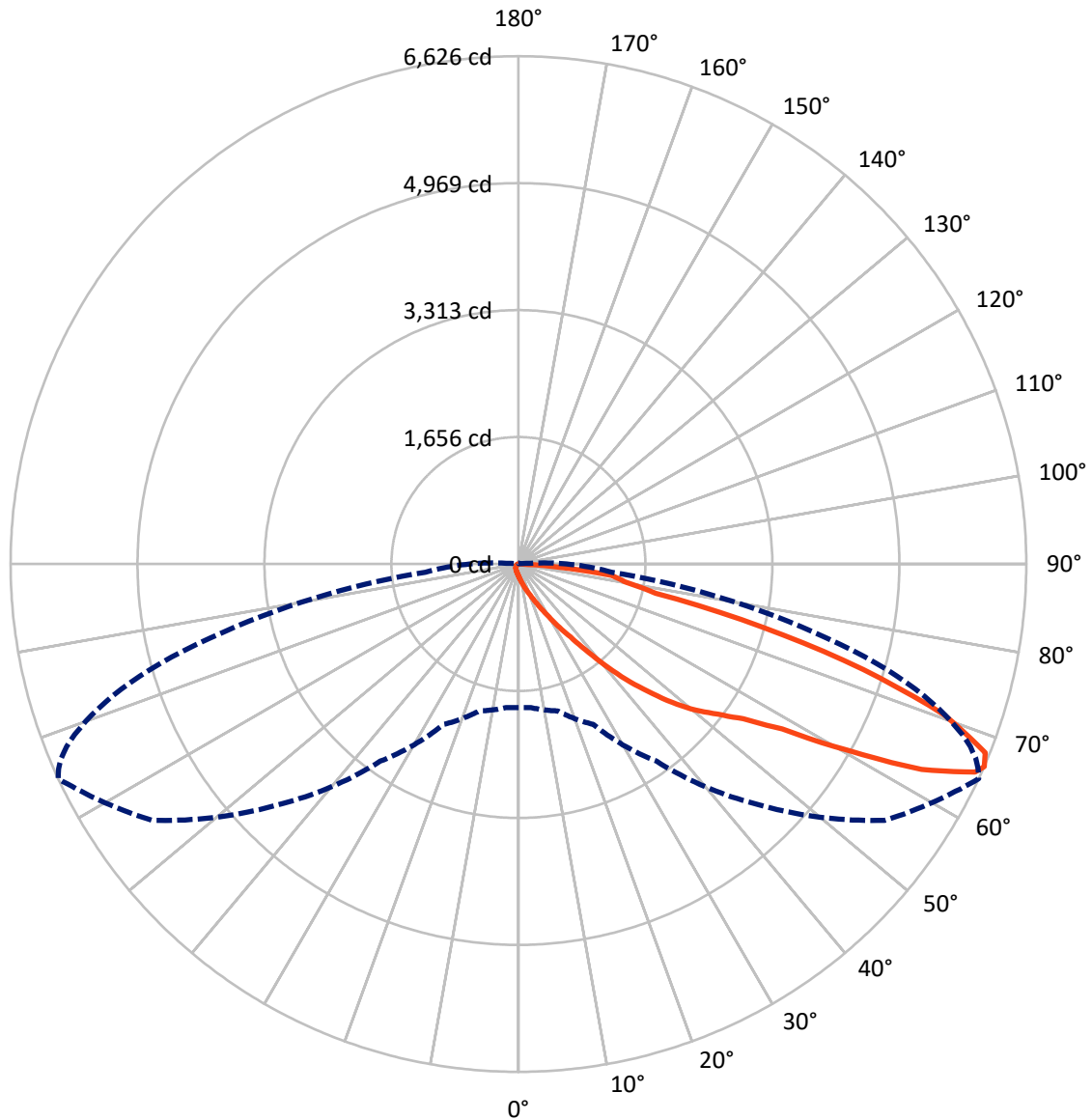
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	112.2	0.0	112.2
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	5064.9	0.0	5064.9
	% Fixture	97.8	0.0	97.8
Total	Lumens	5177.1	0.0	5177.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.5	0.3
10°-20°	74.2	1.4
20°-30°	160.0	3.1
30°-40°	341.6	6.6
40°-50°	755.5	14.6
50°-60°	1280.4	24.7
60°-70°	1708.6	33.0
70°-80°	752.6	14.5
80°-90°	86.7	1.7
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°	5177.1	100.0
0°-180°	5177.1	100.0



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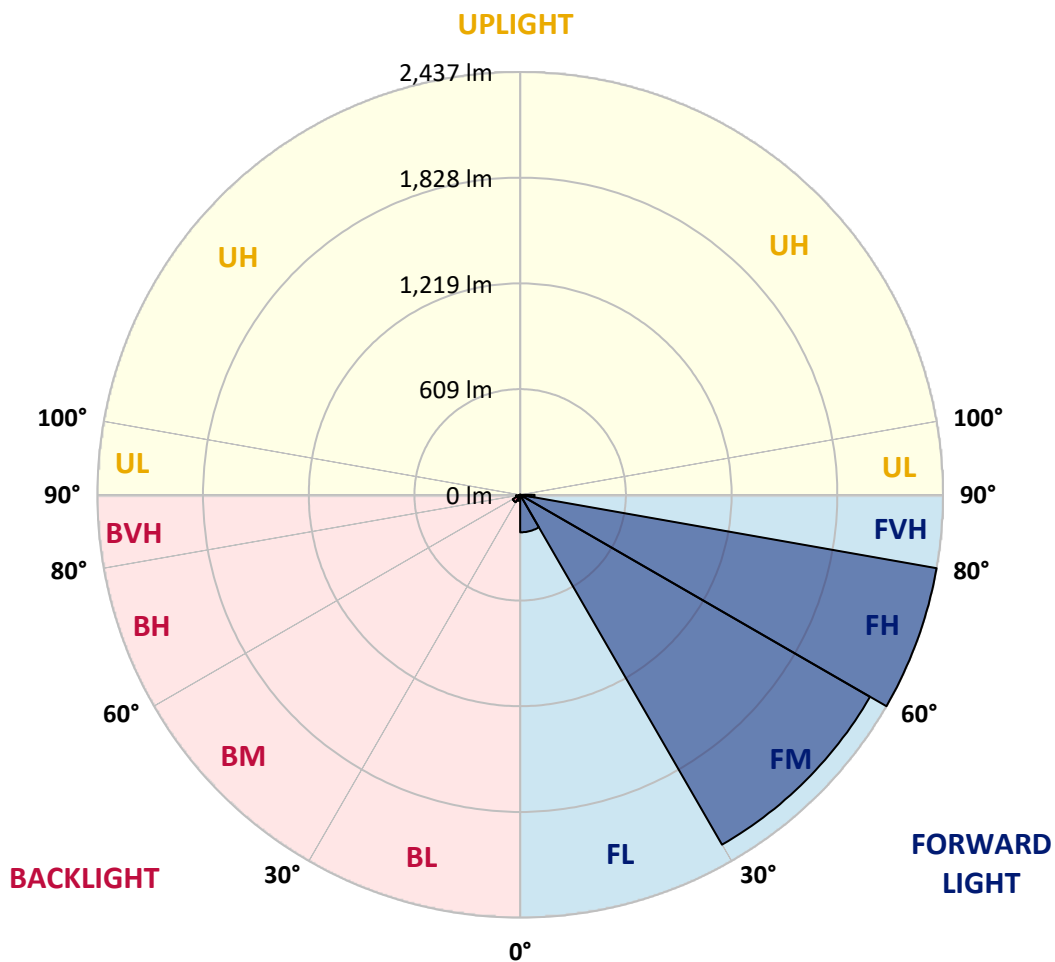
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	216.2	4.2			
FM	(30°-60°)	2328.3	45.0			
FH	(60°-80°)	2437.1	47.1			G2/5000
FVH	(80°-90°)	83.2	1.6			G1/100
BL	(0°-30°)	35.4	0.7	B0/110		
BM	(30°-60°)	49.3	1.0	B0/220		
BH	(60°-80°)	24.1	0.5	B0/110		G0/110
BVH	(80°-90°)	3.5	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3
2.5°	197.1	196.1	192.1	192.1	186.1	182.1	177.2	172.2	172.2	171.2	170.2
5°	260.8	254.8	253.8	242.9	233.9	221.0	209.0	193.1	191.1	189.1	188.1
7.5°	331.4	330.4	321.5	308.6	290.7	266.8	242.9	217.0	213.0	211.0	207.0
10°	423.0	418.0	406.1	384.2	357.3	325.4	286.7	245.8	240.8	236.9	234.9
12.5°	510.6	501.6	494.7	466.8	432.9	386.2	339.4	280.7	276.7	271.7	263.8
15°	592.2	584.3	572.3	548.4	510.6	451.9	397.1	325.4	315.5	308.6	302.6
17.5°	655.9	650.9	637.0	610.1	569.3	517.6	451.9	371.2	363.3	354.3	343.4
20°	716.6	709.7	687.8	650.9	607.2	567.3	516.5	431.0	420.0	409.0	397.1
22.5°	774.4	767.4	731.5	670.8	624.0	607.2	589.3	498.6	481.8	472.8	460.8
25°	855.0	840.1	784.3	687.8	625.1	638.0	668.9	586.2	570.3	557.4	538.5
27.5°	963.5	943.6	856.0	712.6	629.0	671.8	760.4	692.7	675.8	660.9	640.0
30°	1085.9	1072.9	968.4	772.3	657.9	721.6	862.9	828.1	808.2	790.3	765.4
32.5°	1209.3	1191.4	1087.9	885.8	735.5	818.2	991.3	985.4	959.5	942.6	915.7
35°	1317.8	1308.8	1232.2	1071.9	912.7	987.3	1162.5	1169.5	1146.6	1128.7	1098.8
37.5°	1391.5	1391.5	1376.5	1272.0	1194.4	1250.1	1414.4	1415.3	1392.4	1351.6	1336.7
40°	1429.3	1440.2	1494.0	1513.9	1509.9	1581.6	1744.8	1726.9	1708.0	1687.0	1637.3
42.5°	1506.9	1516.9	1631.3	1768.7	1858.3	1952.8	2065.2	2059.3	2036.4	1998.6	1952.8
45°	1638.3	1651.2	1787.6	2005.5	2189.7	2324.1	2395.7	2367.8	2344.9	2309.1	2285.2
47.5°	1805.5	1830.4	1984.7	2254.4	2476.3	2698.3	2772.9	2699.3	2679.4	2651.5	2612.7
50°	1983.7	2007.6	2171.8	2480.3	2731.1	2995.9	3120.3	2995.9	2967.0	2958.1	2914.3
52.5°	2138.0	2157.8	2316.1	2654.5	2926.2	3236.7	3417.9	3253.7	3232.8	3202.9	3171.0
55°	2229.5	2245.4	2393.7	2738.1	3058.6	3453.7	3705.6	3561.2	3530.4	3518.5	3472.6
57.5°	2260.3	2276.3	2409.6	2749.1	3130.3	3651.8	4054.9	4059.9	4023.1	3980.3	3966.3
60°	2260.3	2278.3	2390.7	2722.2	3199.9	3862.8	4520.7	4935.8	4856.1	4848.2	4797.4
62.5°	2166.8	2183.7	2297.2	2639.6	3293.5	4147.5	5169.7	5902.2	5879.3	5827.6	5744.0
65°	1963.8	1973.7	2085.2	2428.5	3257.7	4409.3	5732.0	6545.2	6508.4	6406.8	6299.3
66°	1872.2	1880.2	1984.7	2308.1	3140.2	4445.1	5831.6	6625.8	6565.1	6479.5	6358.1
67.5°	1739.8	1753.7	1827.4	2084.2	2858.5	4320.7	5768.8	6569.1	6516.3	6412.8	6291.3
70°	1161.5	1151.6	1411.3	1599.5	2177.7	3520.4	5175.6	5898.2	5899.2	5850.5	5801.7
72.5°	551.4	557.4	633.0	984.4	1425.3	2351.9	4119.6	4707.9	4775.5	4687.9	4627.2
75°	396.1	405.1	450.9	602.2	850.0	1411.3	2670.4	3292.5	3294.5	3139.2	3000.9
77.5°	115.4	120.4	169.2	371.2	637.0	952.5	1533.8	1830.4	1787.6	1676.1	1571.6
80°	47.8	47.8	49.7	118.5	255.8	646.9	1072.9	1409.4	1404.4	1361.6	1299.8
82.5°	17.9	18.9	23.9	48.8	60.7	159.3	715.6	1223.3	1220.2	1159.5	1115.8
85°	2.0	2.0	6.0	20.9	22.9	29.9	143.3	539.4	536.5	539.4	472.8
87.5°	0.0	0.0	1.0	2.0	3.0	4.0	6.0	20.9	22.9	21.9	19.9
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3
2.5°	170.2	168.2	168.2	167.2	167.2	167.2	166.2	165.2	165.2	164.2	163.2
5°	186.1	184.1	183.2	181.1	180.1	179.2	177.2	176.1	174.2	173.2	172.2
7.5°	205.0	201.1	200.0	197.1	194.1	192.1	190.1	187.1	185.1	181.1	180.1
10°	228.9	223.9	220.0	216.0	213.0	208.0	205.0	201.1	197.1	194.1	191.1
12.5°	259.7	252.8	246.8	242.9	235.9	229.9	223.9	221.0	213.0	209.0	204.0
15°	293.6	285.7	278.7	270.7	265.7	255.8	247.8	238.9	234.9	227.9	220.0
17.5°	337.4	324.5	313.5	305.6	295.6	285.7	276.7	267.8	255.8	247.8	237.9
20°	384.2	373.2	358.3	344.4	332.5	320.5	307.5	295.6	284.7	271.7	259.7
22.5°	443.9	428.0	410.1	396.1	380.2	367.2	349.3	333.4	315.5	298.6	284.7
25°	519.6	498.6	481.8	461.8	442.9	423.0	401.1	381.2	358.3	342.4	318.5
27.5°	613.1	593.2	570.3	544.4	525.5	495.7	466.8	441.9	415.0	390.1	363.3
30°	732.6	703.7	679.8	654.9	617.1	588.2	554.4	520.5	483.7	458.9	418.0
32.5°	875.9	845.0	809.2	773.3	738.5	697.7	655.9	614.1	573.3	527.5	485.7
35°	1051.1	1014.2	973.4	934.6	880.8	837.1	784.3	726.6	680.8	628.0	575.3
37.5°	1283.0	1222.2	1186.4	1145.6	1072.9	1013.2	954.5	896.8	816.2	760.4	685.8
40°	1573.6	1537.7	1479.0	1413.3	1347.6	1269.0	1189.4	1112.7	1019.2	941.6	855.0
42.5°	1915.0	1862.3	1802.5	1708.0	1641.3	1548.7	1458.1	1356.6	1242.2	1142.6	1041.1
45°	2235.5	2172.7	2127.0	2032.4	1962.7	1853.3	1743.8	1636.3	1503.9	1375.5	1258.0
47.5°	2581.8	2530.1	2454.5	2377.8	2307.1	2183.7	2065.2	1934.9	1795.5	1643.3	1491.0
50°	2886.4	2845.6	2793.8	2701.3	2622.7	2519.1	2379.8	2237.4	2061.3	1910.0	1736.8
52.5°	3145.2	3113.3	3040.7	2975.0	2904.3	2806.8	2682.4	2546.0	2355.9	2189.7	1992.6
55°	3450.7	3427.8	3364.2	3323.4	3260.6	3167.1	3050.6	2924.2	2723.2	2542.0	2319.1
57.5°	3951.4	3933.5	3877.8	3860.8	3799.1	3717.5	3574.2	3438.8	3203.9	2978.9	2724.2
60°	4780.5	4744.7	4663.0	4621.2	4490.8	4381.4	4195.3	4009.1	3725.4	3438.8	3132.2
62.5°	5668.3	5567.8	5412.5	5279.1	5094.0	4903.9	4655.1	4370.4	4038.0	3697.6	3345.3
65°	6147.0	5975.9	5779.8	5567.8	5327.9	5048.2	4734.7	4393.3	4036.0	3676.7	3304.4
66°	6201.8	6008.7	5800.7	5564.8	5298.0	5000.4	4681.9	4323.6	3952.4	3602.1	3229.8
67.5°	6133.1	5931.1	5711.1	5449.4	5160.7	4852.2	4517.7	4145.4	3788.2	3432.8	3070.6
70°	5652.4	5451.3	5255.2	4979.5	4672.0	4361.5	4045.0	3628.9	3290.5	2964.0	2641.6
72.5°	4513.7	4377.4	4183.3	3947.4	3647.8	3283.5	3019.8	2647.5	2353.9	2037.4	1787.6
75°	2820.7	2628.6	2388.8	2088.1	1859.2	1563.7	1409.4	1126.7	959.5	813.2	671.8
77.5°	1442.2	1297.9	1129.7	960.5	798.3	637.0	492.7	348.3	234.9	163.2	121.4
80°	1191.4	1064.0	924.7	770.4	627.1	486.7	350.4	238.9	152.3	99.6	77.6
82.5°	984.4	876.9	752.5	609.1	484.7	382.2	265.7	173.2	107.5	69.7	54.7
85°	419.0	380.2	293.6	232.9	175.2	129.4	90.6	60.7	42.8	34.8	31.8
87.5°	17.9	19.9	18.9	14.9	11.0	11.0	10.0	7.9	7.9	7.9	7.9
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3
2.5°	163.2	162.2	161.2	161.2	160.3	159.3	153.3	148.3	142.3	138.3	134.3
5°	170.2	169.2	167.2	166.2	164.2	163.2	150.3	139.3	130.4	123.4	118.5
7.5°	177.2	176.1	173.2	170.2	169.2	167.2	146.3	132.4	120.4	112.5	107.5
10°	186.1	183.2	180.1	176.1	173.2	170.2	142.3	124.4	111.5	104.5	99.6
12.5°	199.0	194.1	189.1	184.1	180.1	175.2	140.3	117.5	104.5	96.5	91.5
15°	214.0	207.0	201.1	195.1	188.1	183.2	136.4	111.5	98.5	90.6	84.6
17.5°	227.9	220.0	211.0	202.1	195.1	188.1	132.4	105.5	92.5	84.6	78.6
20°	247.8	235.9	225.0	214.0	204.0	195.1	126.4	99.6	87.6	78.6	72.6
22.5°	269.7	255.8	241.8	226.9	214.0	202.1	121.4	94.6	82.6	73.6	66.7
25°	297.6	280.7	261.8	242.9	227.9	212.0	116.4	89.6	77.6	68.6	61.7
27.5°	336.4	312.5	291.6	267.8	244.8	226.9	112.5	85.6	72.6	63.7	56.7
30°	389.2	354.3	321.5	295.6	268.7	242.9	108.5	80.6	68.6	58.7	50.7
32.5°	447.9	407.1	369.3	330.4	296.6	266.8	104.5	76.7	63.7	53.7	46.8
35°	520.5	468.8	418.0	373.2	332.5	292.6	100.5	72.6	59.7	48.8	41.8
37.5°	625.1	560.4	493.7	436.0	383.2	330.4	97.5	68.6	54.7	43.8	36.8
40°	768.4	684.8	603.2	524.5	455.8	390.1	93.6	64.7	50.7	39.8	32.8
42.5°	923.7	822.2	714.7	626.1	531.5	448.9	89.6	60.7	46.8	35.8	28.9
45°	1116.8	990.4	860.0	739.5	624.0	517.6	85.6	56.7	41.8	31.8	24.9
47.5°	1327.7	1166.5	1019.2	867.9	730.5	603.2	80.6	53.7	37.8	27.9	21.9
50°	1544.7	1374.5	1188.4	1016.2	853.0	688.7	75.7	48.8	33.9	24.9	17.9
52.5°	1778.7	1577.6	1387.5	1173.5	983.4	801.2	70.7	44.8	30.8	21.9	14.9
55°	2076.2	1851.3	1628.3	1388.4	1159.5	931.6	65.7	39.8	26.8	18.9	11.9
57.5°	2450.5	2183.7	1910.0	1639.3	1361.6	1102.8	61.7	34.8	22.9	15.9	10.0
60°	2803.8	2492.3	2160.8	1849.3	1535.8	1234.2	55.7	30.8	19.9	12.9	10.0
62.5°	2987.0	2631.6	2274.3	1930.9	1596.5	1280.9	49.7	25.9	16.9	11.0	8.9
65°	2942.1	2579.9	2233.5	1887.1	1559.7	1251.1	43.8	22.9	14.9	10.0	8.9
66°	2877.4	2519.1	2170.8	1841.3	1528.8	1219.3	40.8	21.9	13.9	10.0	7.9
67.5°	2736.1	2389.8	2057.3	1750.8	1444.2	1158.6	36.8	19.9	12.9	8.9	7.9
70°	2337.0	2022.5	1756.7	1484.0	1234.2	976.4	29.9	16.9	11.0	7.9	7.9
72.5°	1546.7	1332.7	1155.5	994.3	831.1	645.0	24.9	13.9	8.9	7.9	7.0
75°	583.3	527.5	452.9	407.1	355.3	311.5	19.9	8.9	7.0	7.0	7.0
77.5°	103.5	95.6	84.6	77.6	71.7	65.7	15.9	6.0	6.0	7.0	7.0
80°	69.7	64.7	58.7	53.7	49.7	44.8	11.0	5.0	6.0	6.0	7.0
82.5°	49.7	46.8	43.8	39.8	36.8	32.8	7.0	5.0	6.0	6.0	6.0
85°	29.9	27.9	25.9	23.9	20.9	19.9	5.0	5.0	5.0	6.0	6.0
87.5°	7.9	7.0	7.9	7.9	6.0	7.0	4.0	4.0	4.0	5.0	5.0
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-SL3-E03-E-7050-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	156.3	156.3	156.3	156.3	156.3
2.5°	132.4	132.4	130.4	133.4	133.4
5°	114.5	114.5	113.5	114.5	114.5
7.5°	104.5	103.5	103.5	103.5	104.5
10°	95.6	94.6	94.6	94.6	94.6
12.5°	87.6	86.6	85.6	86.6	86.6
15°	80.6	78.6	78.6	78.6	78.6
17.5°	74.6	72.6	71.7	71.7	71.7
20°	68.6	65.7	65.7	65.7	65.7
22.5°	62.7	59.7	59.7	59.7	59.7
25°	56.7	53.7	53.7	53.7	53.7
27.5°	51.8	48.8	48.8	48.8	48.8
30°	45.8	43.8	43.8	44.8	43.8
32.5°	41.8	38.8	38.8	39.8	39.8
35°	36.8	34.8	34.8	34.8	34.8
37.5°	31.8	29.9	29.9	29.9	29.9
40°	27.9	25.9	24.9	25.9	25.9
42.5°	23.9	21.9	20.9	20.9	20.9
45°	20.9	17.9	16.9	17.9	17.9
47.5°	16.9	14.9	14.9	15.9	15.9
50°	12.9	12.9	13.9	15.9	15.9
52.5°	11.9	11.9	13.9	15.9	15.9
55°	11.0	11.9	13.9	14.9	15.9
57.5°	10.0	11.9	13.9	14.9	14.9
60°	10.0	11.0	12.9	14.9	14.9
62.5°	8.9	10.0	11.9	13.9	13.9
65°	8.9	10.0	11.9	13.9	13.9
66°	8.9	10.0	11.9	13.9	13.9
67.5°	8.9	10.0	11.9	13.9	13.9
70°	8.9	10.0	11.9	12.9	12.9
72.5°	7.9	8.9	11.0	12.9	12.9
75°	7.9	8.9	11.0	12.9	12.9
77.5°	7.9	8.9	11.0	12.9	12.9
80°	7.9	8.9	11.0	11.9	12.9
82.5°	7.0	8.9	10.0	11.9	11.9
85°	7.0	7.9	10.0	11.0	11.9
87.5°	6.0	7.0	7.9	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)