

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: P163520

Luminaire Tested: **LDRL-SL3-F02-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163520
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-F02-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2343.5 lumens
Efficiency: N/A
Efficacy: 42.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

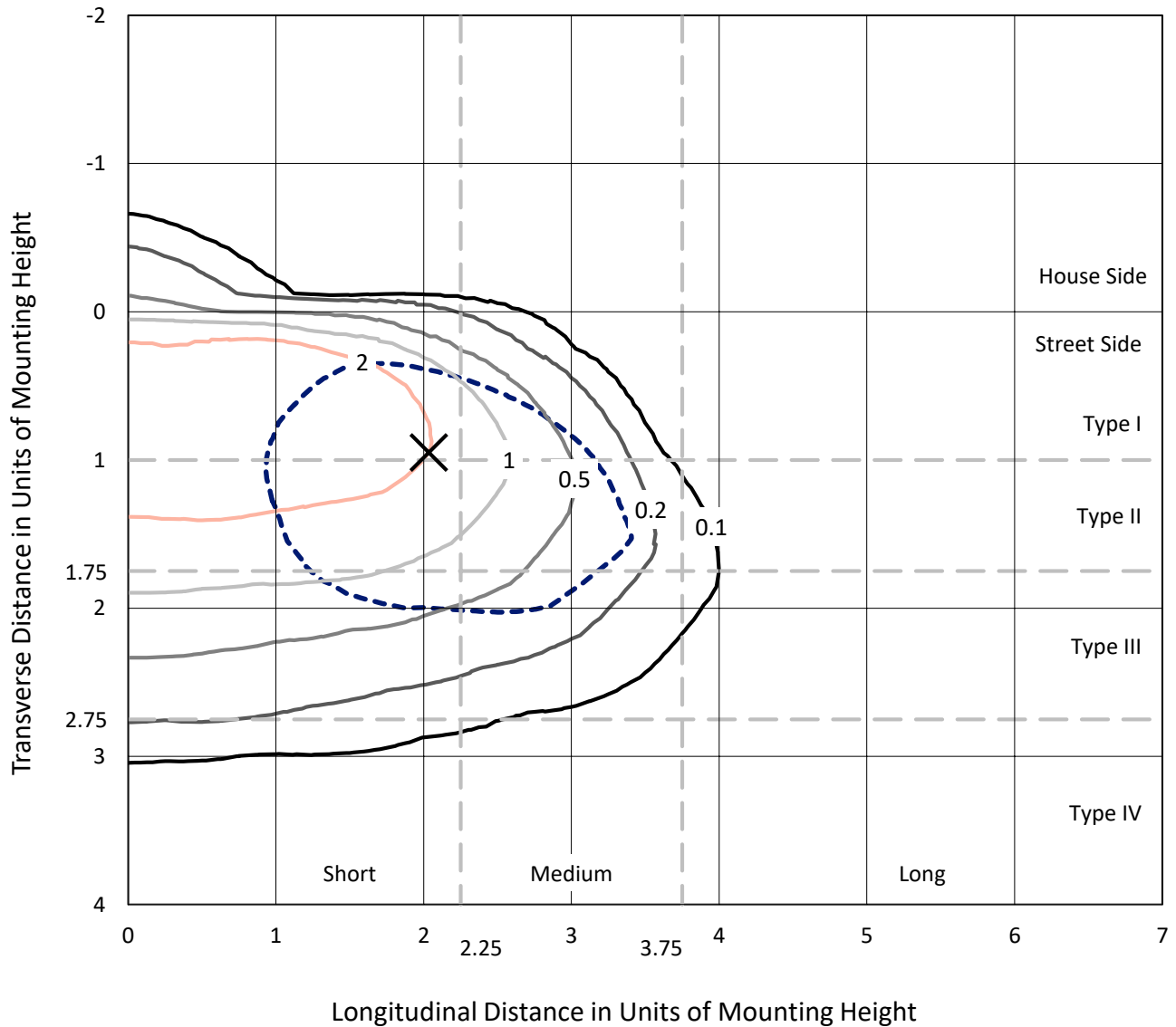
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P163520
 CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

Iso-Footcandle Lines of Horizontal Illumination

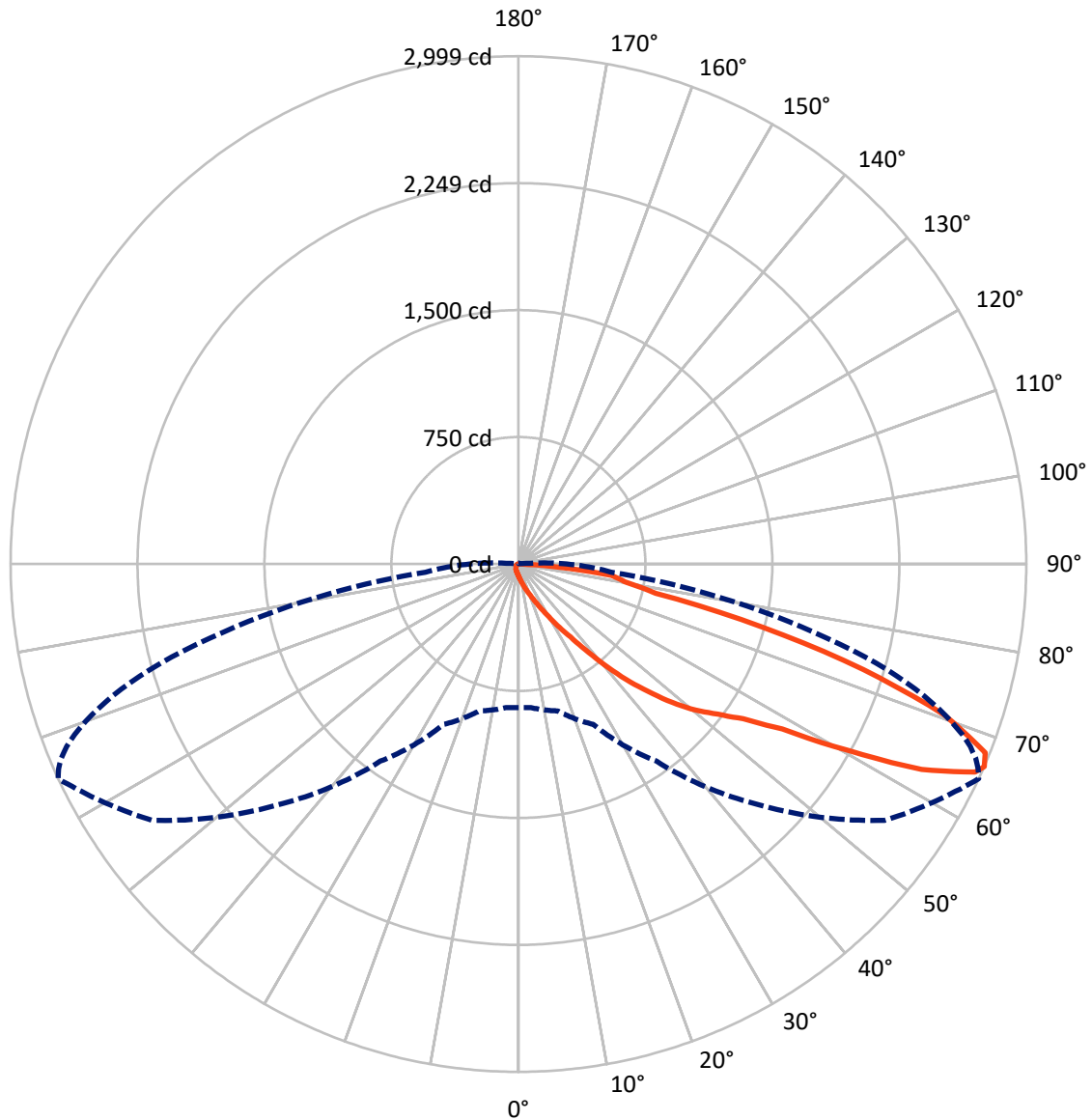
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc
 Type III - Short - Non-Cutoff

REPORT NUMBER: P163520
CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P163520

CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

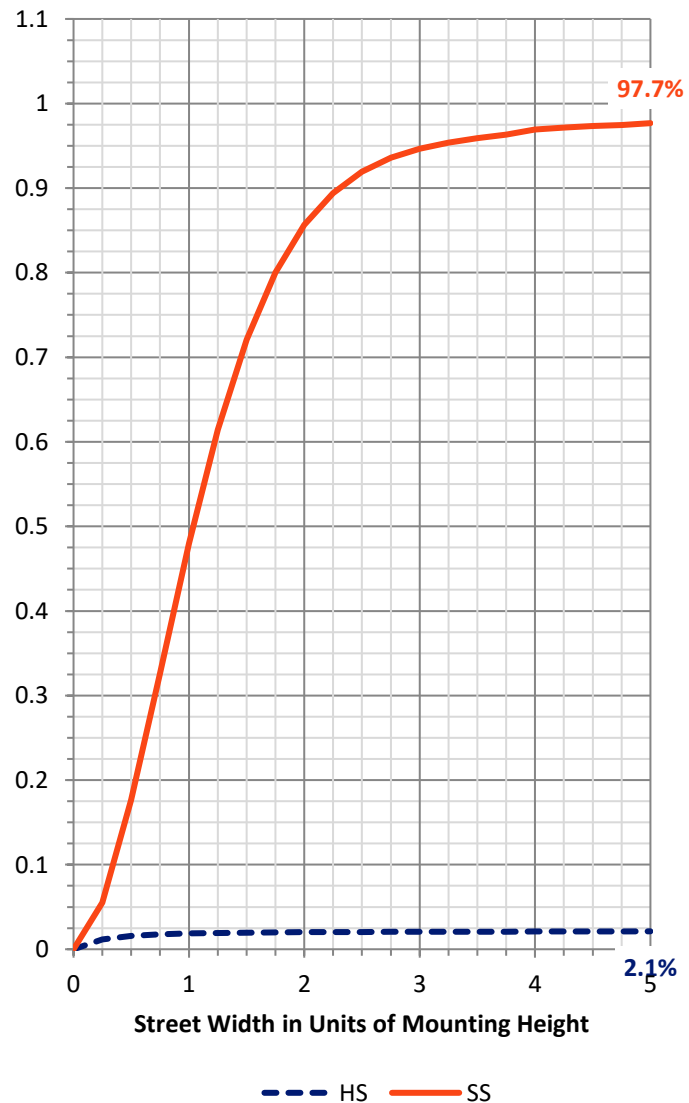
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	50.8	0.0	50.8
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	2292.7	0.0	2292.7
	% Fixture	97.8	0.0	97.8
Total	Lumens	2343.5	0.0	2343.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	7.9	0.3
10°-20°	33.6	1.4
20°-30°	72.4	3.1
30°-40°	154.7	6.6
40°-50°	342.0	14.6
50°-60°	579.6	24.7
60°-70°	773.4	33.0
70°-80°	340.7	14.5
80°-90°	39.2	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°	2343.5	100.0
0°-180°	2343.5	100.0



REPORT NUMBER: P163520

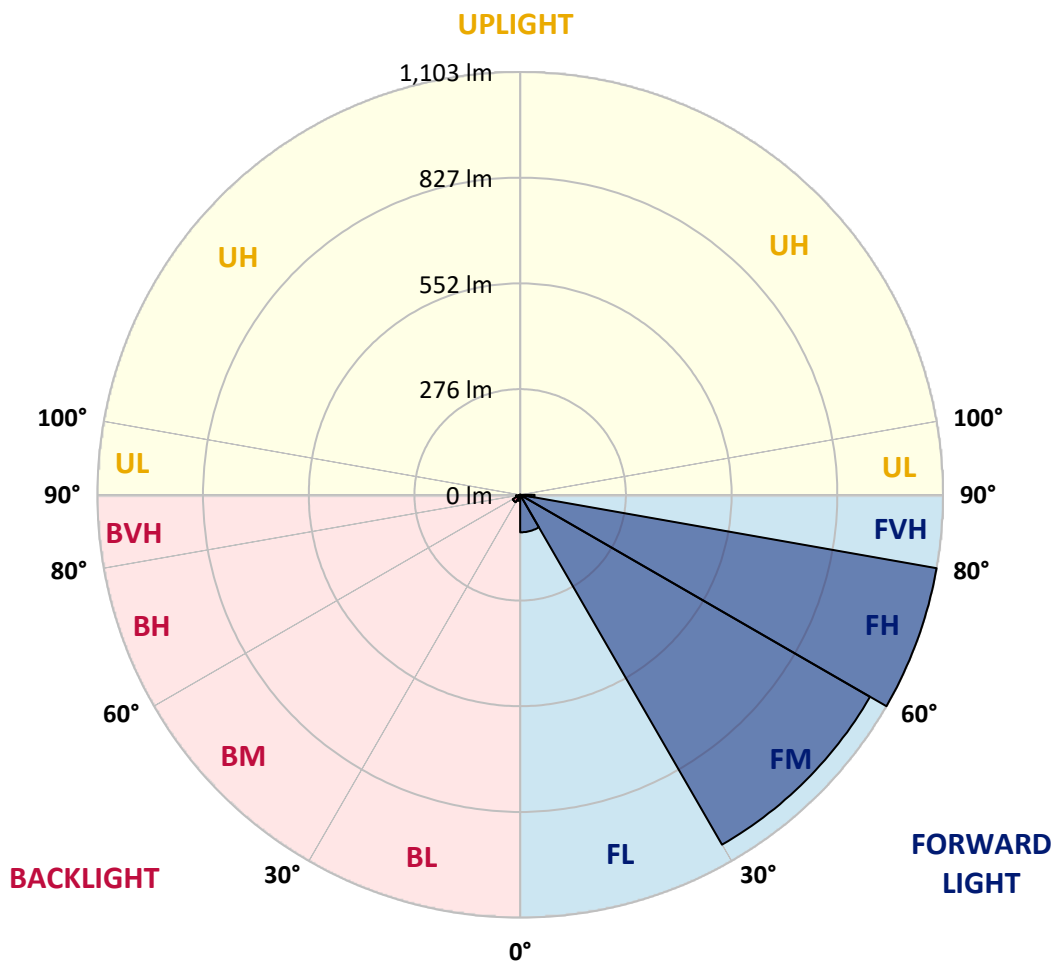
CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	97.9	4.2			
FM	(30°-60°)	1054.0	45.0			
FH	(60°-80°)	1103.2	47.1			G1/1800
FVH	(80°-90°)	37.7	1.6			G1/100
BL	(0°-30°)	16.0	0.7	B0/110		
BM	(30°-60°)	22.3	1.0	B0/220		
BH	(60°-80°)	10.9	0.5	B0/110		G0/110
BVH	(80°-90°)	1.6	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-G1

Type III Short





REPORT NUMBER: P163520

CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7
2.5°	89.2	88.8	87.0	87.0	84.2	82.4	80.2	78.0	78.0	77.5	77.0
5°	118.1	115.4	114.9	109.9	105.9	100.0	94.6	87.4	86.5	85.6	85.1
7.5°	150.0	149.6	145.5	139.7	131.6	120.8	109.9	98.2	96.4	95.5	93.7
10°	191.5	189.2	183.8	173.9	161.8	147.3	129.8	111.3	109.0	107.2	106.3
12.5°	231.1	227.1	223.9	211.3	196.0	174.8	153.6	127.1	125.2	123.0	119.4
15°	268.1	264.5	259.1	248.3	231.1	204.6	179.8	147.3	142.8	139.7	137.0
17.5°	296.9	294.7	288.4	276.2	257.7	234.3	204.6	168.1	164.5	160.4	155.4
20°	324.4	321.3	311.3	294.7	274.8	256.8	233.8	195.1	190.1	185.2	179.8
22.5°	350.5	347.4	331.1	303.7	282.5	274.8	266.7	225.7	218.1	214.0	208.6
25°	387.0	380.3	355.0	311.3	283.0	288.8	302.8	265.4	258.2	252.3	243.7
27.5°	436.1	427.1	387.5	322.6	284.7	304.1	344.2	313.6	305.9	299.2	289.7
30°	491.6	485.7	438.4	349.6	297.8	326.7	390.6	374.9	365.8	357.7	346.5
32.5°	547.4	539.3	492.5	401.0	333.0	370.4	448.8	446.1	434.3	426.7	414.5
35°	596.5	592.5	557.8	485.2	413.2	446.9	526.2	529.4	519.0	510.9	497.4
37.5°	629.9	629.9	623.1	575.8	540.7	565.9	640.2	640.7	630.3	611.8	605.1
40°	647.0	651.9	676.3	685.3	683.5	715.9	789.8	781.7	773.2	763.7	741.2
42.5°	682.1	686.6	738.5	800.6	841.2	884.0	934.9	932.2	921.8	904.7	884.0
45°	741.6	747.5	809.2	907.8	991.2	1052.0	1084.5	1071.9	1061.5	1045.3	1034.5
47.5°	817.3	828.6	898.4	1020.5	1121.0	1221.4	1255.2	1221.9	1212.9	1200.3	1182.7
50°	898.0	908.8	983.1	1122.8	1236.3	1356.2	1412.5	1356.2	1343.1	1339.0	1319.2
52.5°	967.8	976.8	1048.4	1201.6	1324.6	1465.2	1547.2	1472.8	1463.4	1449.9	1435.4
55°	1009.2	1016.5	1083.6	1239.5	1384.6	1563.4	1677.4	1612.1	1598.1	1592.7	1572.0
57.5°	1023.2	1030.4	1090.8	1244.4	1417.0	1653.1	1835.5	1837.8	1821.1	1801.8	1795.5
60°	1023.2	1031.3	1082.2	1232.2	1448.5	1748.6	2046.4	2234.3	2198.2	2194.6	2171.7
62.5°	980.8	988.5	1039.9	1194.9	1490.9	1877.5	2340.2	2671.8	2661.4	2638.0	2600.1
65°	889.0	893.4	943.9	1099.3	1474.7	1996.0	2594.7	2962.8	2946.2	2900.2	2851.5
66°	847.5	851.1	898.4	1044.8	1421.5	2012.2	2639.8	2999.3	2971.8	2933.1	2878.1
67.5°	787.6	793.9	827.2	943.5	1294.0	1955.8	2611.4	2973.6	2949.8	2902.9	2847.9
70°	525.8	521.3	638.9	724.0	985.8	1593.6	2342.9	2670.0	2670.4	2648.3	2626.3
72.5°	249.6	252.3	286.6	445.6	645.2	1064.6	1864.8	2131.1	2161.7	2122.1	2094.6
75°	179.3	183.4	204.1	272.6	384.8	638.9	1208.8	1490.4	1491.3	1421.0	1358.4
77.5°	52.3	54.5	76.6	168.1	288.4	431.2	694.3	828.6	809.2	758.7	711.4
80°	21.6	21.6	22.5	53.6	115.8	292.9	485.7	638.0	635.7	616.4	588.4
82.5°	8.1	8.6	10.8	22.1	27.5	72.1	324.0	553.7	552.4	524.9	505.1
85°	0.9	0.9	2.7	9.4	10.4	13.5	64.9	244.2	242.9	244.2	214.0
87.5°	0.0	0.0	0.4	0.9	1.3	1.8	2.7	9.4	10.4	9.9	9.0
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: P163520

CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7
2.5°	77.0	76.1	76.1	75.7	75.7	75.7	75.2	74.8	74.8	74.3	73.9
5°	84.2	83.4	82.9	82.0	81.5	81.1	80.2	79.7	78.8	78.4	78.0
7.5°	92.8	91.0	90.5	89.2	87.8	87.0	86.1	84.7	83.8	82.0	81.5
10°	103.6	101.4	99.6	97.8	96.4	94.2	92.8	91.0	89.2	87.8	86.5
12.5°	117.6	114.4	111.7	109.9	106.8	104.1	101.4	100.0	96.4	94.6	92.4
15°	132.9	129.3	126.2	122.5	120.3	115.8	112.2	108.1	106.3	103.2	99.6
17.5°	152.7	146.9	141.9	138.3	133.8	129.3	125.2	121.2	115.8	112.2	107.7
20°	173.9	168.9	162.2	155.9	150.5	145.1	139.2	133.8	128.9	123.0	117.6
22.5°	200.9	193.7	185.6	179.3	172.1	166.2	158.1	150.9	142.8	135.2	128.9
25°	235.2	225.7	218.1	209.0	200.5	191.5	181.6	172.6	162.2	155.0	144.2
27.5°	277.6	268.5	258.2	246.4	237.9	224.4	211.3	200.0	187.9	176.6	164.5
30°	331.6	318.5	307.7	296.5	279.3	266.3	251.0	235.6	219.0	207.7	189.2
32.5°	396.5	382.5	366.3	350.1	334.3	315.8	296.9	278.0	259.5	238.8	219.9
35°	475.8	459.1	440.6	423.1	398.7	378.9	355.0	328.9	308.2	284.3	260.4
37.5°	580.8	553.3	537.0	518.6	485.7	458.6	432.1	405.9	369.5	344.2	310.4
40°	712.3	696.1	669.5	639.8	610.0	574.4	538.4	503.7	461.4	426.2	387.0
42.5°	866.9	843.0	816.0	773.2	743.0	701.1	660.1	614.1	562.3	517.2	471.3
45°	1011.9	983.5	962.8	920.0	888.5	838.9	789.4	740.7	680.8	622.7	569.5
47.5°	1168.7	1145.3	1111.1	1076.4	1044.4	988.5	934.9	875.9	812.8	743.9	674.9
50°	1306.6	1288.1	1264.7	1222.8	1187.2	1140.3	1077.3	1012.8	933.1	864.6	786.2
52.5°	1423.7	1409.3	1376.4	1346.7	1314.7	1270.6	1214.2	1152.5	1066.5	991.2	902.0
55°	1562.1	1551.7	1522.9	1504.4	1476.0	1433.7	1380.9	1323.7	1232.7	1150.7	1049.8
57.5°	1788.7	1780.6	1755.4	1747.7	1719.8	1682.8	1617.9	1556.6	1450.3	1348.5	1233.2
60°	2164.0	2147.8	2110.8	2091.9	2032.9	1983.3	1899.1	1814.8	1686.4	1556.6	1417.9
62.5°	2565.9	2520.4	2450.1	2389.7	2305.9	2219.9	2107.2	1978.4	1827.9	1673.8	1514.3
65°	2782.6	2705.1	2616.4	2520.4	2411.8	2285.2	2143.3	1988.7	1827.0	1664.3	1495.8
66°	2807.4	2720.0	2625.8	2519.0	2398.3	2263.6	2119.4	1957.2	1789.1	1630.6	1462.0
67.5°	2776.3	2684.8	2585.3	2466.8	2336.1	2196.4	2045.1	1876.5	1714.8	1553.9	1390.0
70°	2558.7	2467.7	2378.9	2254.1	2114.9	1974.3	1831.0	1642.7	1489.5	1341.7	1195.8
72.5°	2043.2	1981.5	1893.7	1786.9	1651.3	1486.4	1367.0	1198.5	1065.6	922.3	809.2
75°	1276.9	1189.9	1081.3	945.2	841.6	707.8	638.0	510.0	434.3	368.1	304.1
77.5°	652.8	587.5	511.4	434.8	361.4	288.4	223.0	157.7	106.3	73.9	55.0
80°	539.3	481.6	418.6	348.7	283.9	220.3	158.6	108.1	68.9	45.1	35.1
82.5°	445.6	396.9	340.6	275.7	219.4	173.0	120.3	78.4	48.7	31.5	24.8
85°	189.7	172.1	132.9	105.4	79.3	58.6	41.0	27.5	19.4	15.8	14.4
87.5°	8.1	9.0	8.6	6.7	5.0	5.0	4.5	3.6	3.6	3.6	3.6
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: P163520

CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7
2.5°	73.9	73.4	73.0	73.0	72.5	72.1	69.4	67.1	64.4	62.6	60.8
5°	77.0	76.6	75.7	75.2	74.3	73.9	68.0	63.1	59.0	55.9	53.6
7.5°	80.2	79.7	78.4	77.0	76.6	75.7	66.2	59.9	54.5	50.9	48.7
10°	84.2	82.9	81.5	79.7	78.4	77.0	64.4	56.3	50.5	47.3	45.1
12.5°	90.1	87.8	85.6	83.4	81.5	79.3	63.5	53.2	47.3	43.7	41.4
15°	96.9	93.7	91.0	88.3	85.1	82.9	61.7	50.5	44.6	41.0	38.3
17.5°	103.2	99.6	95.5	91.5	88.3	85.1	59.9	47.8	41.9	38.3	35.6
20°	112.2	106.8	101.8	96.9	92.4	88.3	57.2	45.1	39.7	35.6	32.9
22.5°	122.1	115.8	109.5	102.7	96.9	91.5	55.0	42.8	37.4	33.3	30.2
25°	134.7	127.1	118.5	109.9	103.2	96.0	52.7	40.6	35.1	31.1	27.9
27.5°	152.3	141.5	132.0	121.2	110.8	102.7	50.9	38.7	32.9	28.8	25.7
30°	176.2	160.4	145.5	133.8	121.7	109.9	49.1	36.5	31.1	26.6	23.0
32.5°	202.8	184.3	167.2	149.6	134.3	120.8	47.3	34.7	28.8	24.3	21.2
35°	235.6	212.2	189.2	168.9	150.5	132.5	45.5	32.9	27.0	22.1	18.9
37.5°	283.0	253.7	223.5	197.3	173.5	149.6	44.1	31.1	24.8	19.8	16.7
40°	347.8	310.0	273.0	237.4	206.3	176.6	42.4	29.3	23.0	18.0	14.9
42.5°	418.1	372.2	323.5	283.4	240.6	203.2	40.6	27.5	21.2	16.2	13.1
45°	505.5	448.3	389.3	334.8	282.5	234.3	38.7	25.7	18.9	14.4	11.3
47.5°	601.0	528.0	461.4	392.9	330.7	273.0	36.5	24.3	17.1	12.6	9.9
50°	699.2	622.2	538.0	460.0	386.1	311.8	34.3	22.1	15.3	11.3	8.1
52.5°	805.1	714.1	628.1	531.2	445.2	362.7	32.0	20.3	14.0	9.9	6.7
55°	939.8	838.0	737.1	628.5	524.9	421.7	29.7	18.0	12.2	8.6	5.4
57.5°	1109.3	988.5	864.6	742.1	616.4	499.2	27.9	15.8	10.4	7.2	4.5
60°	1269.2	1128.2	978.1	837.1	695.2	558.7	25.2	14.0	9.0	5.9	4.5
62.5°	1352.1	1191.3	1029.5	874.1	722.7	579.9	22.5	11.7	7.7	5.0	4.0
65°	1331.8	1167.8	1011.0	854.3	706.0	566.3	19.8	10.4	6.7	4.5	4.0
66°	1302.5	1140.3	982.6	833.5	692.1	551.9	18.5	9.9	6.3	4.5	3.6
67.5°	1238.6	1081.8	931.3	792.5	653.8	524.4	16.7	9.0	5.9	4.0	3.6
70°	1057.9	915.5	795.2	671.8	558.7	442.0	13.5	7.7	5.0	3.6	3.6
72.5°	700.2	603.3	523.1	450.1	376.2	292.0	11.3	6.3	4.0	3.6	3.1
75°	264.0	238.8	205.0	184.3	160.8	141.0	9.0	4.0	3.1	3.1	3.1
77.5°	46.8	43.3	38.3	35.1	32.4	29.7	7.2	2.7	2.7	3.1	3.1
80°	31.5	29.3	26.6	24.3	22.5	20.3	5.0	2.3	2.7	2.7	3.1
82.5°	22.5	21.2	19.8	18.0	16.7	14.9	3.1	2.3	2.7	2.7	2.7
85°	13.5	12.6	11.7	10.8	9.4	9.0	2.3	2.3	2.3	2.7	2.7
87.5°	3.6	3.1	3.6	3.6	2.7	3.1	1.8	1.8	1.8	2.3	2.3
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: P163520

CATALOG NUMBER: LDRL-SL3-F02-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	70.7	70.7	70.7	70.7	70.7
2.5°	59.9	59.9	59.0	60.4	60.4
5°	51.8	51.8	51.4	51.8	51.8
7.5°	47.3	46.8	46.8	46.8	47.3
10°	43.3	42.8	42.8	42.8	42.8
12.5°	39.7	39.2	38.7	39.2	39.2
15°	36.5	35.6	35.6	35.6	35.6
17.5°	33.8	32.9	32.4	32.4	32.4
20°	31.1	29.7	29.7	29.7	29.7
22.5°	28.4	27.0	27.0	27.0	27.0
25°	25.7	24.3	24.3	24.3	24.3
27.5°	23.4	22.1	22.1	22.1	22.1
30°	20.7	19.8	19.8	20.3	19.8
32.5°	18.9	17.6	17.6	18.0	18.0
35°	16.7	15.8	15.8	15.8	15.8
37.5°	14.4	13.5	13.5	13.5	13.5
40°	12.6	11.7	11.3	11.7	11.7
42.5°	10.8	9.9	9.4	9.4	9.4
45°	9.4	8.1	7.7	8.1	8.1
47.5°	7.7	6.7	6.7	7.2	7.2
50°	5.9	5.9	6.3	7.2	7.2
52.5°	5.4	5.4	6.3	7.2	7.2
55°	5.0	5.4	6.3	6.7	7.2
57.5°	4.5	5.4	6.3	6.7	6.7
60°	4.5	5.0	5.9	6.7	6.7
62.5°	4.0	4.5	5.4	6.3	6.3
65°	4.0	4.5	5.4	6.3	6.3
66°	4.0	4.5	5.4	6.3	6.3
67.5°	4.0	4.5	5.4	6.3	6.3
70°	4.0	4.5	5.4	5.9	5.9
72.5°	3.6	4.0	5.0	5.9	5.9
75°	3.6	4.0	5.0	5.9	5.9
77.5°	3.6	4.0	5.0	5.9	5.9
80°	3.6	4.0	5.0	5.4	5.9
82.5°	3.1	4.0	4.5	5.4	5.4
85°	3.1	3.6	4.5	5.0	5.4
87.5°	2.7	3.1	3.6	4.5	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)