

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: P163294

Luminaire Tested: **LDRC-SL2-F01-E-7060-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163294
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRC-SL2-F01-E-7060-HSS
Description: RC LED ROADWAY SMALL CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (7) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1506.6 lumens
Efficiency: N/A
Efficacy: 58.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B0 - 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

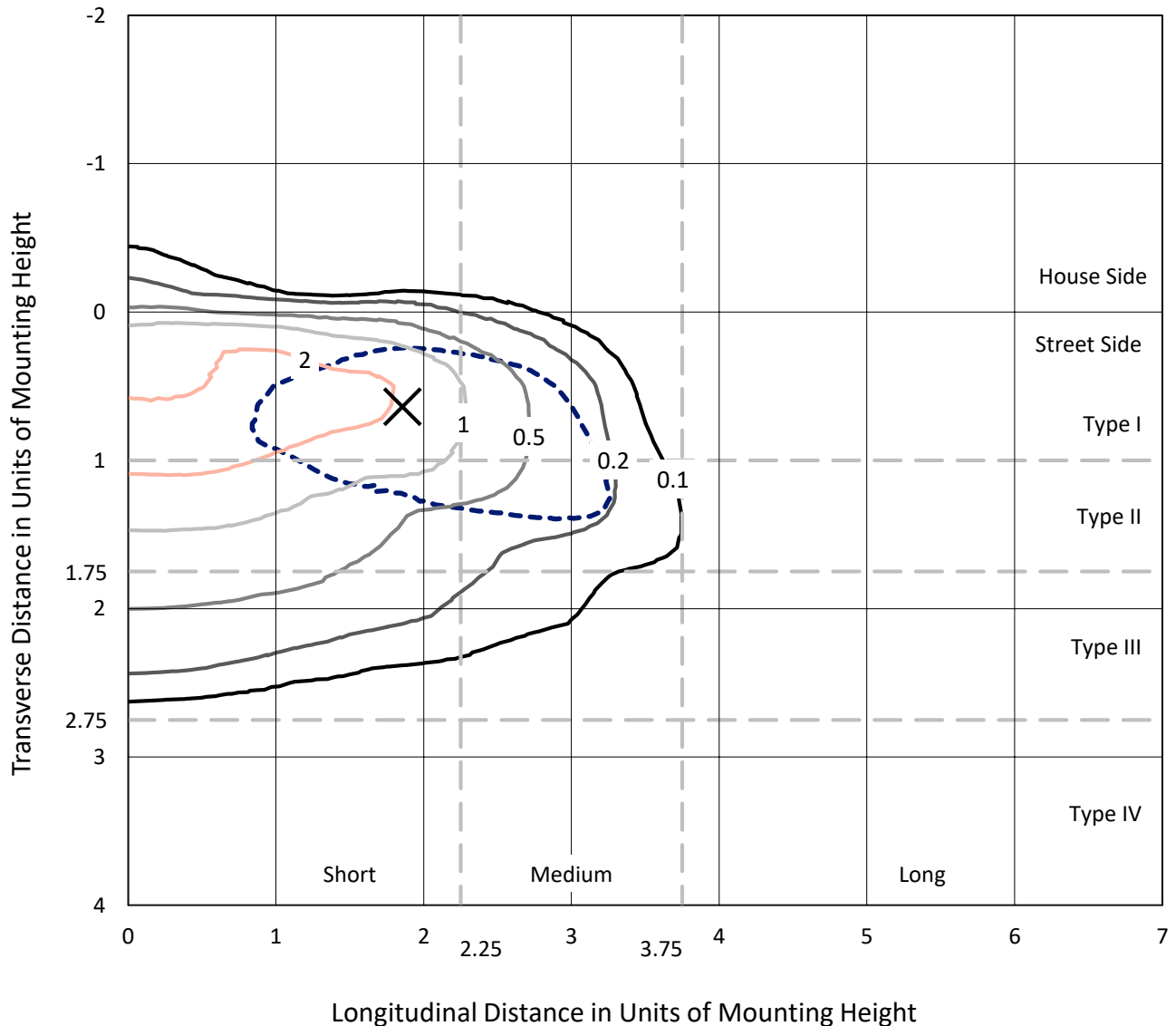


REPORT NUMBER: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

Iso-Footcandle Lines of Horizontal Illumination

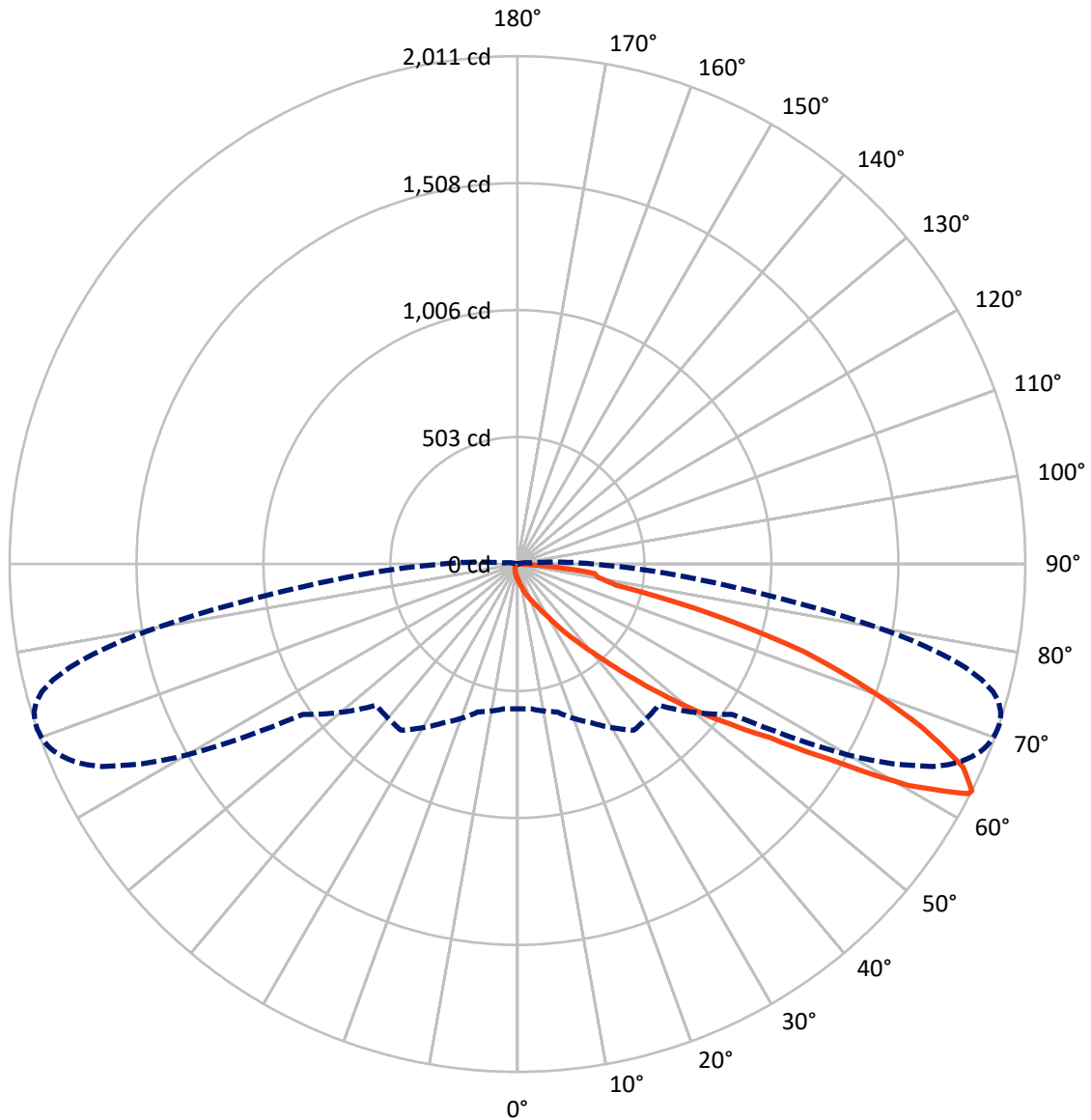
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.2 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P163294
CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

REPORT NUMBER: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	32.0	0.0	32.0
	% Fixture	2.1	0.0	2.1
Street Side	Lumens	1474.6	0.0	1474.6
	% Fixture	97.9	0.0	97.9
Total	Lumens	1506.6	0.0	1506.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.4	0.4
10°-20°	24.8	1.6
20°-30°	50.3	3.3
30°-40°	122.9	8.2
40°-50°	274.9	18.2
50°-60°	386.6	25.7
60°-70°	454.6	30.2
70°-80°	164.1	10.9
80°-90°	21.9	1.5
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°	1506.6	100.0
0°-180°	1506.6	100.0



REPORT NUMBER: P163294

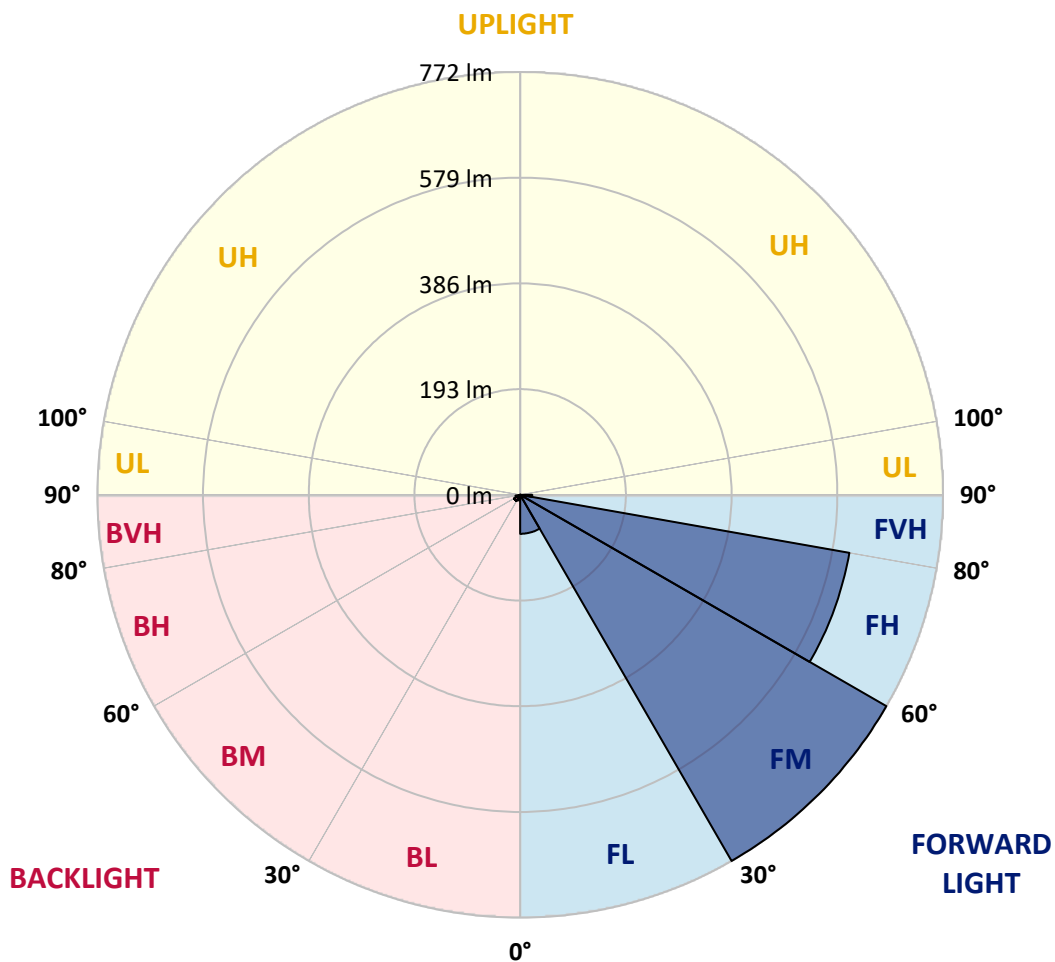
CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	71.2	4.7			
FM	(30°-60°)	771.5	51.2			
FH	(60°-80°)	609.9	40.5			G0/660
FVH	(80°-90°)	21.9	1.5			G1/100
BL	(0°-30°)	10.3	0.7	B0/110		
BM	(30°-60°)	12.9	0.9	B0/220		
BH	(60°-80°)	8.8	0.6	B0/110		G0/110
BVH	(80°-90°)	0.0	0.0			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 II Short





REPORT NUMBER: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8
2.5°	75.6	76.4	75.9	74.5	72.8	70.7	68.7	68.7	68.5	67.6	67.9
5°	99.1	99.4	98.3	95.0	92.0	87.4	82.2	81.6	81.1	80.3	80.0
7.5°	122.1	123.2	122.1	118.6	112.6	105.4	97.2	96.4	94.8	94.8	93.7
10°	145.7	145.7	144.6	140.5	135.0	124.9	114.5	113.1	111.2	110.6	109.0
12.5°	162.4	162.4	161.9	159.7	155.3	146.3	133.7	132.3	129.8	129.0	127.1
15°	169.0	169.0	169.3	171.2	171.4	167.3	154.2	153.1	150.6	148.4	147.6
17.5°	173.1	172.8	172.8	175.6	180.5	183.2	174.7	173.7	170.9	169.8	167.1
20°	182.1	181.6	179.9	179.9	184.6	194.2	194.2	193.9	190.9	190.1	188.7
22.5°	195.6	195.0	190.1	186.0	188.2	200.2	211.4	210.9	209.8	208.7	207.9
25°	217.5	215.5	207.1	195.0	193.1	206.0	224.6	225.9	226.8	226.8	227.3
27.5°	250.6	248.1	233.1	210.6	202.1	215.3	239.1	241.8	244.3	244.9	247.3
30°	296.6	292.2	270.6	237.7	218.3	229.0	260.5	263.5	267.0	268.1	272.0
32.5°	372.2	369.7	348.9	299.6	258.0	255.8	290.3	294.2	298.8	300.7	305.4
35°	487.2	487.8	470.8	426.4	368.9	338.8	343.7	347.0	348.7	354.4	356.9
37.5°	565.3	566.7	570.5	553.0	511.9	481.2	442.6	446.2	437.7	438.5	438.8
40°	608.0	612.4	634.9	651.8	648.6	630.7	599.8	601.7	585.8	582.3	565.0
42.5°	636.5	642.3	678.1	730.7	757.6	773.7	766.6	765.8	753.5	748.8	734.3
45°	654.3	659.5	704.7	782.2	844.1	891.2	910.7	912.9	902.5	897.8	885.7
47.5°	653.5	659.5	708.0	801.4	892.6	967.9	1022.7	1025.4	1031.7	1027.6	1028.4
50°	617.3	623.1	671.8	768.8	878.3	1003.0	1103.2	1112.0	1122.1	1128.9	1132.2
52.5°	573.5	577.6	620.9	712.9	817.5	988.5	1150.9	1165.9	1181.0	1193.9	1202.9
55°	557.4	562.0	596.0	672.4	768.8	927.6	1173.0	1195.2	1216.6	1237.7	1254.9
57.5°	565.8	570.2	594.6	653.2	739.8	863.6	1179.3	1213.9	1248.9	1283.2	1317.1
60°	597.1	601.7	622.5	671.0	732.1	826.6	1154.7	1211.9	1270.3	1330.0	1386.1
62.5°	584.7	586.7	617.3	702.2	786.9	795.1	1065.1	1145.1	1234.1	1326.1	1416.8
63°	573.0	575.2	606.4	693.8	803.6	790.4	1037.5	1121.8	1215.8	1314.9	1413.5
65°	519.6	519.8	543.7	612.7	785.0	798.7	914.2	994.8	1102.7	1221.5	1346.1
67.5°	387.8	385.9	408.9	461.5	616.2	798.9	784.7	829.9	904.9	1010.4	1122.1
70°	137.5	134.5	171.7	244.6	384.0	653.5	674.3	677.3	698.1	755.1	825.2
72.5°	44.6	45.5	54.8	89.6	176.9	439.9	610.5	601.2	595.7	595.4	604.7
75°	17.8	18.1	21.9	39.7	79.4	212.0	534.6	539.8	541.7	544.5	547.5
77.5°	8.5	9.3	12.3	22.2	39.4	104.9	382.6	426.7	451.9	471.4	483.1
80°	3.0	3.6	6.8	13.7	18.3	48.2	201.6	243.2	280.2	327.8	368.9
82.5°	0.0	0.0	1.4	9.6	10.1	19.4	82.7	97.0	110.9	143.8	184.6
85°	0.0	0.0	0.0	2.7	3.0	3.3	27.9	33.7	37.8	44.1	50.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	1.6	4.1	6.3
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: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8
2.5°	67.4	67.1	67.1	66.5	66.3	65.7	65.5	64.6	64.4	64.4	64.4
5°	79.7	78.6	78.0	76.7	75.9	75.6	74.2	73.7	72.8	73.1	71.8
7.5°	93.4	91.5	90.7	88.7	88.2	86.3	85.7	84.4	83.5	81.9	81.3
10°	108.5	106.0	104.6	101.6	100.8	99.4	97.8	96.1	94.8	93.1	92.3
12.5°	125.7	123.5	122.4	118.3	116.4	114.5	112.3	110.1	107.9	106.5	104.6
15°	146.0	142.4	141.3	137.5	134.2	131.7	128.7	126.0	124.4	121.6	119.7
17.5°	166.0	162.4	161.6	155.8	152.3	150.6	147.4	143.8	140.8	138.0	135.0
20°	186.0	183.5	181.3	175.8	172.0	169.3	164.9	161.3	158.9	155.0	151.2
22.5°	206.0	203.5	201.9	196.1	192.5	188.7	184.9	181.0	177.5	172.8	168.4
25°	226.5	224.9	224.0	218.8	215.5	212.0	208.2	203.8	199.4	194.2	189.5
27.5°	247.9	248.4	246.8	245.7	242.1	239.7	233.6	230.6	227.3	221.0	215.3
30°	275.0	276.6	276.1	276.9	274.7	273.1	268.4	264.6	260.7	254.7	248.1
32.5°	309.2	311.4	312.5	315.5	314.4	313.9	312.5	307.0	304.3	293.9	291.1
35°	362.1	361.0	365.6	368.1	367.0	366.5	364.8	361.8	358.5	351.1	344.3
37.5°	430.8	431.9	433.6	428.6	425.4	425.1	420.1	417.1	412.5	404.3	396.0
40°	556.8	550.0	542.3	521.5	512.4	507.2	492.7	488.6	480.7	469.4	460.9
42.5°	720.6	713.7	690.7	656.0	637.3	611.6	599.8	585.3	574.1	555.7	545.9
45°	883.3	863.6	860.8	820.3	797.3	763.3	742.2	717.8	692.4	668.3	650.8
47.5°	1020.5	1016.1	1002.7	978.1	956.7	928.2	901.1	863.6	837.3	803.0	771.5
50°	1130.3	1130.0	1125.1	1110.9	1093.1	1070.1	1046.2	1014.5	984.6	942.7	909.0
52.5°	1212.5	1216.9	1218.5	1214.1	1207.3	1187.0	1175.0	1148.4	1123.2	1087.6	1051.2
55°	1272.7	1288.9	1297.1	1306.4	1304.5	1297.4	1296.8	1279.6	1268.1	1239.9	1214.1
57.5°	1347.2	1373.8	1399.3	1444.5	1446.1	1462.0	1470.2	1478.4	1480.6	1469.4	1460.9
60°	1442.0	1496.2	1544.4	1638.9	1663.6	1702.5	1727.7	1755.1	1778.3	1780.2	1779.7
62.5°	1508.8	1592.4	1670.1	1810.4	1858.3	1903.2	1936.9	1963.5	1979.6	1996.1	2003.7
63°	1510.7	1602.2	1684.9	1829.5	1879.9	1922.7	1954.7	1979.4	1996.4	2006.2	2011.1
65°	1464.5	1575.4	1674.0	1818.0	1865.4	1908.4	1925.1	1941.3	1949.5	1953.3	1938.8
67.5°	1241.3	1349.7	1464.7	1625.8	1666.3	1717.8	1731.5	1739.7	1743.6	1742.7	1730.4
70°	928.2	1019.1	1147.0	1331.1	1384.8	1435.1	1466.4	1479.8	1484.2	1482.8	1464.5
72.5°	648.0	701.4	806.9	1011.7	1084.9	1149.5	1188.1	1208.1	1212.2	1204.0	1187.0
75°	544.2	547.0	570.8	682.8	751.3	820.3	863.8	876.4	868.2	843.3	800.0
77.5°	485.9	491.9	491.9	508.6	522.0	541.2	545.3	514.6	479.0	433.0	395.8
80°	407.5	428.6	443.4	455.7	457.1	453.3	443.1	425.9	398.5	363.4	324.5
82.5°	247.6	289.2	306.2	369.7	401.0	422.1	420.4	397.4	376.6	340.2	307.0
85°	62.4	67.4	73.1	95.0	106.5	130.1	144.9	151.7	154.2	141.6	128.2
87.5°	6.0	4.1	6.8	5.2	7.4	5.5	7.4	6.8	8.5	9.0	9.9
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: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

CANDELA DISTRIBUTION (continued):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8
2.5°	63.8	63.5	63.3	63.0	62.7	62.4	61.9	61.9	61.3	61.1	60.8
5°	70.9	70.4	70.1	69.6	68.7	68.2	67.4	66.3	65.5	65.2	64.6
7.5°	80.0	78.6	78.0	77.2	76.1	74.5	73.4	72.6	71.2	70.4	68.7
10°	90.1	88.7	87.1	85.5	83.8	81.9	80.5	79.4	77.2	76.1	74.2
12.5°	103.0	100.5	98.6	96.4	94.2	92.0	90.4	87.1	85.2	82.7	81.1
15°	116.1	113.9	111.7	109.0	105.7	102.2	100.5	97.5	95.0	91.2	89.0
17.5°	132.0	127.9	124.6	121.3	118.3	115.0	111.7	107.1	103.5	100.2	95.9
20°	147.6	142.7	139.1	134.8	130.4	125.2	121.3	118.0	113.1	108.7	104.1
22.5°	164.3	159.4	153.6	149.3	143.2	139.1	133.9	128.5	123.5	117.8	112.0
25°	184.6	179.4	172.8	167.1	160.2	154.5	148.2	141.9	135.9	129.3	121.9
27.5°	209.5	204.0	196.9	190.1	181.0	173.9	167.9	159.4	151.7	143.5	135.0
30°	241.0	235.0	226.2	216.4	207.3	199.4	190.9	179.7	171.2	161.3	150.4
32.5°	282.1	275.0	263.2	253.9	242.7	232.3	220.5	209.2	197.2	184.3	171.7
35°	333.9	327.3	313.6	299.9	287.6	275.2	260.5	247.6	230.6	215.0	198.8
37.5°	387.6	375.8	363.2	348.4	333.0	318.2	300.2	282.4	262.9	246.0	225.7
40°	448.9	434.7	424.2	408.4	386.7	365.6	348.9	326.8	302.4	279.6	255.8
42.5°	533.0	517.1	498.5	474.4	458.8	434.1	412.5	386.2	354.1	328.7	299.9
45°	630.2	608.6	590.5	567.2	548.3	517.6	492.4	457.4	425.4	391.9	356.9
47.5°	741.1	714.3	688.0	665.0	634.9	604.7	572.7	535.5	494.4	457.7	416.0
50°	868.5	830.4	794.0	764.4	723.1	688.3	653.5	611.6	566.1	524.0	476.6
52.5°	1010.1	966.0	917.8	872.3	824.4	779.8	737.9	689.6	639.0	587.5	534.6
55°	1181.0	1147.9	1091.2	1033.4	969.3	909.6	855.6	795.9	734.3	666.6	611.0
57.5°	1448.6	1432.4	1385.0	1327.2	1243.7	1171.1	1079.6	1006.5	917.2	824.1	752.4
60°	1811.2	1791.2	1764.6	1717.8	1651.5	1552.9	1452.1	1338.5	1202.6	1073.6	951.2
62.5°	2004.6	1997.4	1975.8	1943.5	1881.6	1803.8	1702.2	1577.3	1423.9	1267.3	1111.1
63°	2010.3	2001.3	1982.6	1949.8	1895.3	1820.0	1720.3	1598.9	1448.9	1289.2	1129.8
65°	1932.5	1929.0	1910.1	1874.2	1837.0	1779.4	1702.2	1597.8	1471.9	1320.9	1162.4
67.5°	1714.0	1703.3	1674.3	1663.3	1637.3	1597.3	1538.4	1466.7	1376.5	1258.0	1121.0
70°	1449.7	1433.8	1397.4	1377.9	1346.1	1320.9	1285.1	1233.9	1178.2	1095.5	993.4
72.5°	1169.5	1136.6	1103.2	1052.5	1008.2	963.3	923.5	887.4	826.3	792.9	715.4
75°	759.5	699.8	642.5	565.8	496.8	435.8	376.3	346.2	283.5	258.0	221.6
77.5°	360.4	327.0	282.1	247.3	202.9	165.7	135.3	101.6	79.7	62.4	47.7
80°	290.9	262.7	235.5	204.0	170.6	136.1	104.3	78.0	55.3	38.3	27.1
82.5°	259.4	228.7	195.3	173.7	150.9	123.5	101.3	82.7	61.1	44.6	30.4
85°	100.8	84.9	65.5	53.4	41.6	34.2	31.0	21.4	16.7	13.1	10.1
87.5°	8.8	7.1	5.7	3.8	4.1	2.2	2.5	1.6	1.4	1.4	1.1
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: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

CANDELA DISTRIBUTION (continued):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8
2.5°	60.5	60.3	60.0	59.4	59.4	58.9	58.6	58.3	57.0	54.0	51.5
5°	63.5	63.0	62.4	61.6	61.1	60.3	59.7	58.9	55.9	50.1	45.2
7.5°	67.9	66.8	66.0	64.4	63.5	62.4	61.6	60.3	55.3	46.6	39.7
10°	73.1	71.2	69.8	67.9	66.3	64.9	63.5	61.6	54.8	42.7	34.8
12.5°	79.4	77.2	74.5	72.3	70.1	68.2	66.3	63.8	54.0	39.4	31.0
15°	85.7	82.4	80.5	77.5	74.5	71.8	69.0	66.8	54.2	35.9	27.7
17.5°	92.8	89.6	85.5	82.2	78.9	75.3	72.0	67.6	52.9	33.1	25.2
20°	99.7	95.0	91.2	87.1	82.4	78.0	73.9	70.1	51.8	30.4	23.0
22.5°	107.1	101.6	96.7	91.5	85.7	80.8	75.9	70.9	49.8	27.9	21.1
25°	116.1	109.8	102.7	96.4	90.4	84.4	78.0	72.0	47.9	25.8	19.7
27.5°	127.1	118.9	111.7	103.8	95.3	87.6	80.8	74.2	46.0	24.1	18.3
30°	141.1	131.5	121.3	111.2	102.2	93.4	83.8	75.6	44.1	22.5	17.0
32.5°	159.7	147.6	135.3	123.5	111.5	100.2	90.1	79.4	43.0	21.1	15.6
35°	184.3	168.7	153.6	138.9	124.4	110.6	97.5	85.5	43.0	19.4	14.0
37.5°	207.6	189.5	170.4	152.0	134.8	118.9	103.3	88.7	40.8	18.1	12.6
40°	232.8	211.2	188.7	167.1	146.3	126.5	108.7	92.0	38.9	16.4	11.2
42.5°	271.4	244.0	214.7	189.5	164.6	140.2	118.0	98.3	36.4	14.8	9.9
45°	322.1	287.3	252.8	222.1	190.4	160.5	134.2	109.8	35.9	13.4	8.5
47.5°	376.3	335.2	294.7	255.5	218.3	183.5	152.0	122.7	35.9	12.0	7.4
50°	430.3	378.8	335.5	290.0	248.1	207.1	169.5	136.1	36.2	11.0	6.0
52.5°	479.0	424.0	375.5	322.9	276.6	229.0	188.2	149.3	35.6	9.6	4.9
55°	546.7	482.0	425.9	367.8	313.6	259.9	213.6	169.0	35.9	8.5	4.1
57.5°	671.3	595.4	527.8	451.6	389.2	319.9	263.7	209.5	39.2	7.1	3.0
60°	850.1	751.5	656.5	563.7	484.2	401.8	328.9	265.1	46.0	5.7	2.2
62.5°	970.4	841.4	728.0	625.5	533.3	447.0	367.5	295.0	50.7	4.7	1.4
63°	982.7	849.3	735.4	629.7	535.5	449.2	369.2	297.2	50.9	4.4	1.4
65°	1006.0	863.0	739.5	630.5	533.3	446.2	368.1	296.9	51.5	3.6	1.1
67.5°	979.4	841.9	715.7	606.9	514.1	428.3	354.4	285.9	51.2	2.5	0.8
70°	875.9	761.9	651.0	549.7	465.3	387.8	322.6	260.7	47.1	1.6	0.5
72.5°	643.1	565.6	479.6	406.4	350.6	291.1	248.4	195.8	36.4	1.1	0.3
75°	190.6	173.7	146.0	128.7	113.7	93.9	83.5	65.2	18.6	0.5	0.0
77.5°	38.1	34.5	31.0	28.2	26.6	22.7	21.6	17.8	7.7	0.3	0.0
80°	20.0	16.4	14.0	12.3	10.7	8.8	7.4	6.0	1.4	0.0	0.0
82.5°	19.2	12.9	9.3	7.7	6.6	5.2	4.1	3.0	0.8	0.0	0.0
85°	7.1	5.5	4.1	3.3	2.7	2.5	1.9	1.6	0.0	0.0	0.0
87.5°	1.1	0.8	0.8	0.5	0.5	0.3	0.3	0.3	0.0	0.0	0.0
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: P163294

CATALOG NUMBER: LDRC-SL2-F01-E-7060-HSS

CANDELA DISTRIBUTION (continued):

	125°	135°	145°	155°	165°	175°	180°
0°	57.8	57.8	57.8	57.8	57.8	57.8	57.8
2.5°	49.0	46.8	45.7	44.4	44.4	44.1	44.6
5°	40.8	37.8	35.6	34.0	34.2	33.4	33.7
7.5°	34.5	31.5	29.6	28.5	28.2	27.9	27.9
10°	29.9	27.1	25.5	24.6	24.4	24.4	24.4
12.5°	26.6	23.8	22.5	21.9	21.9	21.6	21.6
15°	23.8	21.6	20.3	19.7	19.7	19.4	19.7
17.5°	21.6	19.4	18.3	17.8	17.8	17.5	17.5
20°	19.7	17.8	16.7	15.9	15.9	15.6	15.9
22.5°	18.1	16.2	14.8	14.2	14.0	13.7	14.0
25°	16.4	14.5	13.1	12.3	12.0	12.0	11.8
27.5°	15.1	13.1	11.5	10.7	10.4	10.4	10.1
30°	13.7	11.5	9.9	9.0	8.8	8.8	8.8
32.5°	12.3	9.9	8.5	7.7	7.4	7.4	7.4
35°	11.0	8.5	7.1	6.3	6.0	6.0	6.0
37.5°	9.3	7.1	5.5	4.9	4.7	4.4	4.4
40°	7.9	5.5	4.1	3.6	3.0	3.0	3.0
42.5°	6.6	4.4	3.0	2.2	1.9	1.6	1.9
45°	5.5	3.3	1.9	1.1	0.8	0.8	0.8
47.5°	4.4	2.2	0.8	0.3	0.3	0.3	0.3
50°	3.3	1.4	0.3	0.0	0.0	0.3	0.3
52.5°	2.5	0.8	0.0	0.0	0.0	0.0	0.0
55°	1.4	0.3	0.0	0.0	0.0	0.0	0.0
57.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
63°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)