

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: P145125

Luminaire Tested: **LDRL-SL3-F01-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P145125  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33702)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-SL3-F01-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL  
Light Source: (7) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2450.7 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

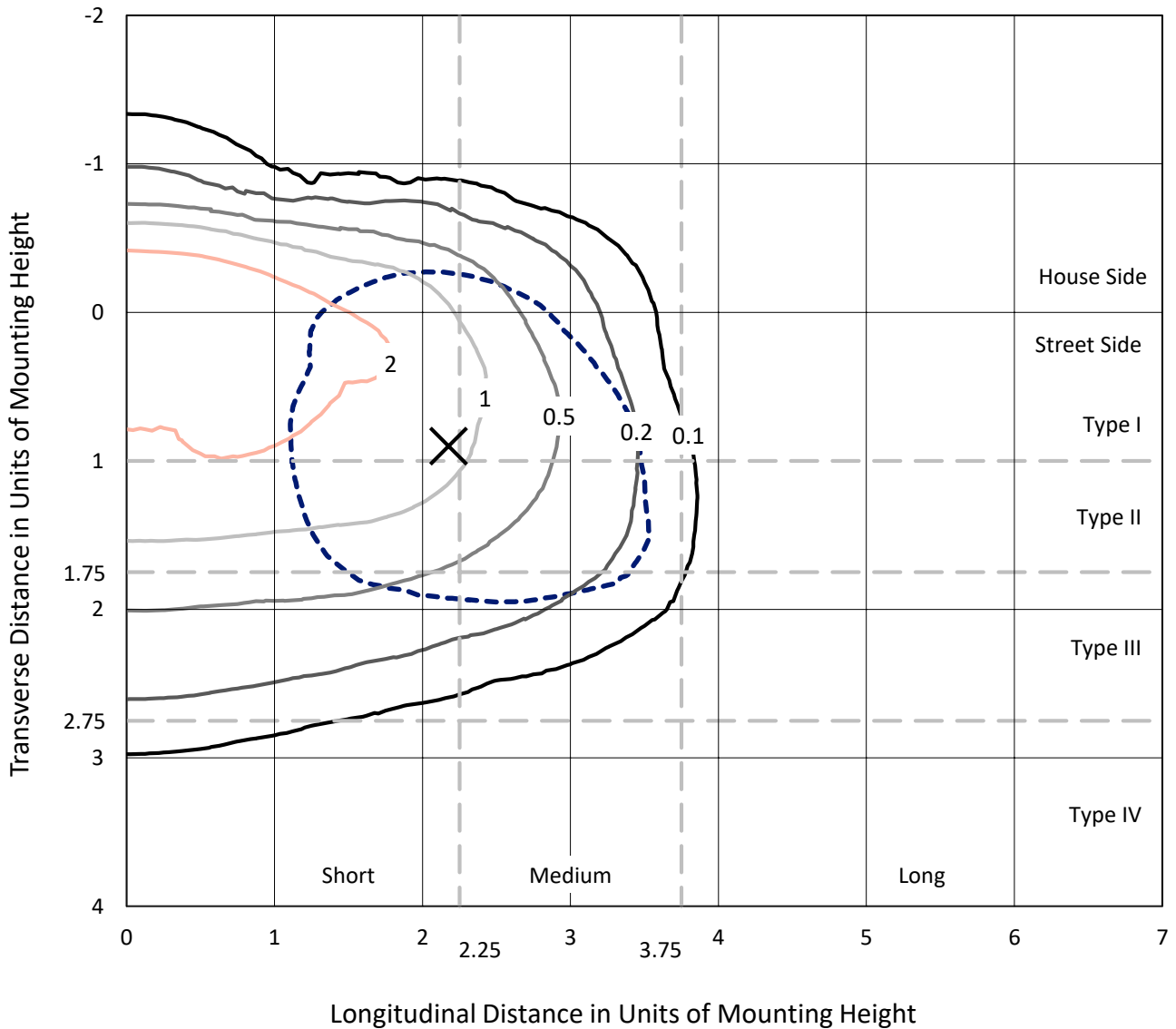
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

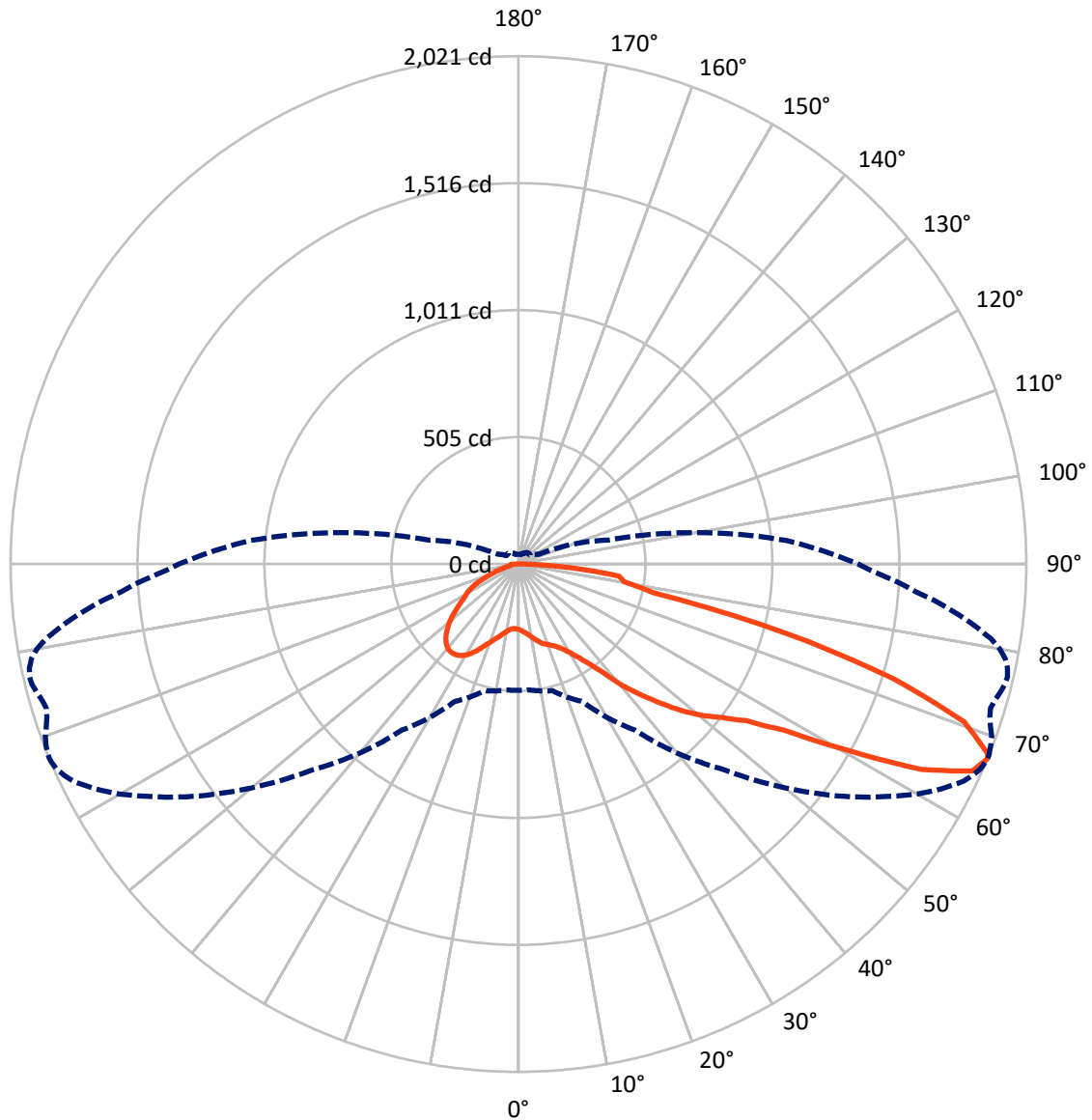
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.3 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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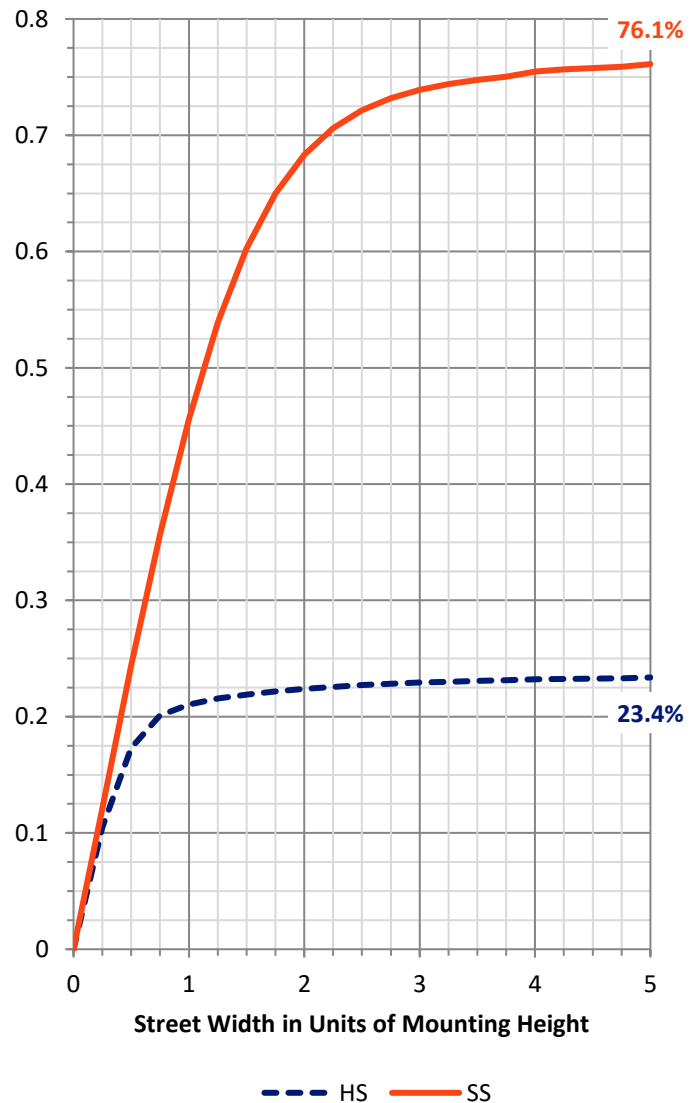
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	580.3	0.0	580.3
	% Fixture	23.7	0.0	23.7
<b>Street Side</b>	Lumens	1870.4	0.0	1870.4
	% Fixture	76.3	0.0	76.3
<b>Total</b>	Lumens	2450.7	0.0	2450.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.0	1.1
10°-20°	89.1	3.6
20°-30°	158.6	6.5
30°-40°	231.1	9.4
40°-50°	356.0	14.5
50°-60°	521.4	21.3
60°-70°	692.3	28.3
70°-80°	326.3	13.3
80°-90°	49.9	2.0
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°	2450.7	100.0
0°-180°	2450.7	100.0



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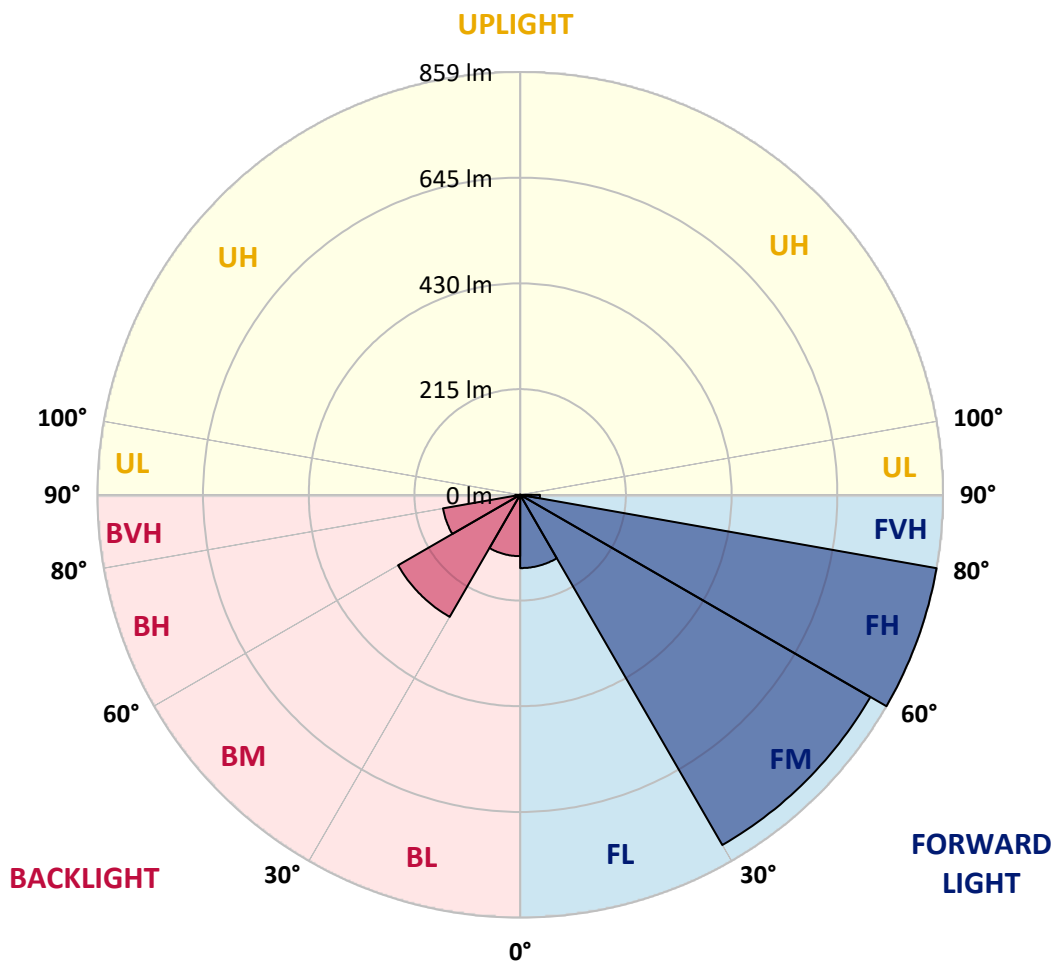
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	149.0	6.1			
FM	(30°-60°)	821.9	33.5			
FH	(60°-80°)	859.4	35.1			G1/1800
FVH	(80°-90°)	40.2	1.6			G1/100
BL	(0°-30°)	124.8	5.1	B1/500		
BM	(30°-60°)	286.6	11.7	B1/1000		
BH	(60°-80°)	159.3	6.5	B1/500		G1/500
BVH	(80°-90°)	9.7	0.4			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7
2.5°	273.7	272.6	272.8	273.2	271.6	270.8	269.0	267.8	267.6	267.5	266.8
5°	289.8	288.6	289.1	287.8	284.6	282.5	278.7	276.7	276.4	276.1	275.2
7.5°	306.4	304.9	303.3	301.8	298.3	294.9	289.9	287.0	286.6	286.1	285.6
10°	326.2	324.1	322.8	318.2	312.2	307.4	302.5	299.3	299.2	298.7	297.7
12.5°	348.5	346.2	343.7	337.6	328.4	321.3	315.5	313.7	312.2	312.4	311.4
15°	370.7	368.2	364.9	357.1	344.9	334.3	326.9	324.3	324.4	323.6	324.1
17.5°	389.3	387.2	382.4	372.5	358.3	343.7	334.3	333.2	333.5	333.3	333.8
20°	401.5	400.2	392.9	381.1	365.0	349.0	339.5	339.5	339.6	340.3	341.4
22.5°	409.0	407.0	397.4	380.7	364.9	351.5	344.1	345.7	346.7	347.2	349.0
25°	413.1	410.6	397.6	375.4	359.3	353.3	351.0	355.1	356.8	357.6	360.6
27.5°	413.1	410.1	395.4	368.8	352.8	358.8	364.2	371.3	372.5	375.0	378.4
30°	408.5	406.2	392.1	363.9	351.2	369.0	385.5	393.6	396.4	399.2	403.7
32.5°	403.5	401.5	390.5	366.5	360.4	390.5	418.0	429.1	430.8	433.1	437.7
35°	403.2	402.5	397.7	383.4	388.3	429.8	467.1	474.7	479.3	480.5	482.4
37.5°	406.7	408.0	412.1	410.6	428.4	488.2	531.3	546.5	550.1	548.1	550.0
40°	414.7	418.0	433.4	452.4	489.7	558.9	618.8	636.3	640.3	639.1	638.6
42.5°	440.3	444.8	467.4	508.0	553.4	632.0	700.0	718.9	720.2	720.8	716.6
45°	480.5	482.9	513.0	564.8	622.4	710.8	781.1	802.1	801.3	798.0	794.8
47.5°	526.0	531.1	567.1	629.9	693.8	783.6	863.2	883.6	885.5	882.5	876.7
50°	567.5	571.4	612.0	686.5	756.7	844.2	932.3	953.0	952.7	954.3	956.0
52.5°	600.2	603.8	642.4	724.3	802.9	895.0	984.5	1009.9	1013.9	1016.6	1019.9
55°	617.0	620.8	656.5	740.0	831.0	944.7	1044.8	1081.3	1088.0	1094.0	1099.4
57.5°	617.3	622.3	655.0	738.8	845.5	989.1	1124.5	1190.1	1199.7	1214.8	1233.5
60°	607.3	614.2	643.6	728.1	862.2	1045.4	1256.0	1381.4	1400.3	1426.8	1450.8
62.5°	581.0	587.9	614.2	700.9	881.7	1117.6	1445.8	1629.8	1669.9	1699.3	1746.6
65°	539.6	546.2	568.3	655.8	866.1	1174.6	1587.3	1807.9	1848.8	1885.7	1941.3
67°	502.6	503.2	521.9	604.1	805.7	1156.9	1615.7	1831.7	1869.5	1906.8	1971.4
67.5°	489.5	493.2	507.7	586.9	782.8	1143.8	1604.5	1818.8	1855.4	1895.2	1961.1
70°	395.8	396.7	410.8	468.2	621.1	948.4	1441.2	1654.5	1679.6	1737.9	1802.6
72.5°	241.4	239.7	244.2	286.8	408.8	656.8	1153.9	1362.1	1396.5	1446.2	1489.9
75°	132.9	140.8	146.3	175.8	229.7	386.2	785.7	985.5	1035.9	1065.4	1074.2
77.5°	81.2	80.6	83.0	113.4	188.4	264.2	434.1	578.2	606.3	614.7	582.2
80°	38.6	40.1	39.6	46.7	91.3	222.9	303.5	371.3	385.5	393.6	404.2
82.5°	21.1	22.0	24.9	27.9	36.0	95.9	261.9	342.4	352.0	365.9	381.4
85°	13.2	13.9	19.2	20.1	22.1	29.6	109.1	200.1	208.2	235.8	244.5
87.5°	5.4	5.9	10.4	9.4	11.2	10.4	33.0	50.9	54.0	57.5	63.7
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):**

	65°	66°	67°	67.5°	68°	69°	70°	71°	72°	73°	74°
0°	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7
2.5°	267.0	266.8	266.1	266.0	266.3	266.3	266.0	265.5	265.3	265.2	264.8
5°	274.9	274.6	274.1	273.7	273.6	273.6	273.1	272.6	272.1	271.4	271.3
7.5°	284.3	284.3	284.1	283.7	283.2	282.5	282.0	281.5	281.0	280.7	280.2
10°	296.7	297.4	296.2	295.9	295.7	294.7	294.5	294.1	293.7	292.9	292.9
12.5°	311.4	310.7	310.6	309.9	309.9	309.4	309.2	309.1	308.7	308.1	307.9
15°	323.6	323.6	323.4	323.1	323.4	323.1	322.6	322.9	322.5	322.6	322.1
17.5°	333.5	334.2	334.0	334.2	334.0	334.0	334.3	334.3	334.7	334.0	334.2
20°	341.8	342.8	343.3	342.9	343.3	343.4	344.2	344.6	345.1	345.4	345.4
22.5°	350.4	351.7	352.7	352.7	353.3	354.0	355.5	355.8	357.0	356.8	357.6
25°	362.4	364.6	365.2	366.2	367.0	368.2	370.0	370.8	371.3	372.5	373.8
27.5°	380.9	383.5	384.0	385.2	387.3	388.0	390.0	390.8	392.6	395.1	395.6
30°	406.2	409.5	409.6	410.9	413.4	414.2	415.9	418.0	419.5	422.0	422.2
32.5°	440.5	443.8	443.3	445.8	445.6	448.1	447.6	450.9	452.2	453.5	457.2
35°	486.2	485.9	488.4	489.2	488.7	490.7	490.4	491.8	493.2	493.2	497.1
37.5°	552.1	551.6	551.3	547.8	547.0	547.2	546.5	547.8	545.7	545.7	550.0
40°	640.4	637.5	635.2	632.8	630.5	627.4	624.8	624.1	620.5	620.3	618.6
42.5°	717.2	714.4	712.8	708.3	706.0	705.5	699.1	697.2	696.2	696.9	695.3
45°	797.8	794.8	788.5	786.6	785.9	782.4	781.4	777.0	775.7	778.0	777.1
47.5°	880.8	876.5	873.1	870.8	869.9	867.0	862.7	866.3	864.5	863.2	860.7
50°	955.5	950.7	950.7	946.5	947.2	945.2	940.8	941.8	936.6	938.6	937.3
52.5°	1018.0	1018.4	1020.0	1015.4	1016.2	1016.2	1014.7	1009.9	1011.3	1010.6	1013.7
55°	1097.6	1103.1	1100.1	1100.9	1101.9	1106.5	1109.8	1107.0	1102.4	1106.0	1116.1
57.5°	1236.8	1241.8	1244.7	1247.0	1250.8	1253.0	1270.8	1273.3	1268.0	1278.9	1301.4
60°	1478.8	1484.8	1493.7	1505.4	1507.9	1522.9	1532.2	1543.1	1547.0	1556.4	1580.6
62.5°	1769.9	1783.3	1784.9	1799.8	1811.4	1797.3	1801.0	1814.3	1799.1	1820.0	1820.9
65°	1960.5	1979.9	1980.6	1986.0	1990.3	1977.1	1971.2	1965.2	1950.9	1950.1	1964.4
67°	1993.1	2011.0	2018.4	2021.1	2020.4	2013.6	2003.9	1986.7	1972.8	1964.9	1970.9
67.5°	1983.9	2001.4	2011.8	2014.3	2014.4	2007.8	1998.9	1980.3	1967.2	1958.3	1964.6
70°	1832.0	1873.0	1890.8	1881.5	1886.8	1886.8	1886.5	1869.3	1862.9	1854.3	1851.0
72.5°	1523.3	1551.7	1574.3	1562.2	1563.7	1574.9	1572.3	1574.1	1555.6	1553.6	1523.1
75°	1091.2	1100.3	1092.7	1101.3	1055.0	1038.5	1010.4	969.5	958.8	941.8	890.9
77.5°	579.7	569.4	549.1	547.5	528.5	513.8	495.6	483.8	453.7	437.0	398.9
80°	409.5	414.4	422.2	426.8	431.1	434.4	427.6	408.6	383.5	355.5	328.9
82.5°	391.1	397.9	402.5	404.8	403.2	397.9	382.4	364.2	330.7	306.4	277.7
85°	246.7	252.1	242.7	240.7	244.9	211.5	193.2	178.3	144.5	134.4	118.7
87.5°	66.2	69.8	70.0	67.9	66.5	58.6	51.8	45.9	38.0	35.7	28.9
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):**

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°
0°	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7
2.5°	264.8	264.7	264.7	264.2	263.8	263.7	263.5	263.0	262.7	262.7	262.5
5°	271.1	270.8	270.3	270.1	269.5	269.1	268.5	268.1	267.6	267.3	267.1
7.5°	280.0	279.2	278.2	278.4	277.4	276.9	276.6	275.9	275.4	274.9	274.7
10°	291.9	291.7	290.7	291.1	289.3	290.1	288.4	288.6	287.6	286.6	286.5
12.5°	307.1	306.9	305.9	304.8	304.5	304.6	303.6	303.8	302.6	302.3	302.0
15°	321.6	321.3	320.8	320.0	319.5	319.3	319.0	318.7	317.7	317.7	316.5
17.5°	334.2	334.3	333.7	333.0	332.7	332.2	332.0	332.0	331.2	330.4	330.5
20°	345.2	345.6	345.6	345.1	345.2	344.9	344.7	345.1	344.2	343.9	343.4
22.5°	357.6	357.6	357.8	358.1	358.6	358.8	358.8	358.4	357.9	357.8	356.8
25°	374.8	374.1	375.0	375.3	375.3	376.1	375.8	375.9	376.1	375.6	375.1
27.5°	396.4	395.8	397.4	398.6	398.4	398.9	399.9	398.7	399.4	399.9	398.7
30°	423.0	424.7	425.8	426.6	426.3	427.8	428.3	428.1	427.6	428.4	428.4
32.5°	456.8	456.0	459.0	460.8	461.0	460.6	461.5	462.5	461.6	463.0	462.3
35°	497.1	497.6	498.3	500.3	501.1	499.8	501.1	502.2	501.9	502.1	502.7
37.5°	549.1	550.0	549.3	549.5	549.1	555.4	556.4	557.4	556.2	555.2	558.2
40°	621.3	621.3	621.1	623.3	619.6	623.6	622.4	625.3	628.2	626.6	631.0
42.5°	692.3	696.2	696.6	693.4	696.1	700.4	700.4	702.2	704.8	702.2	706.5
45°	773.7	778.6	777.8	783.1	779.1	784.1	784.9	782.6	788.4	789.0	787.4
47.5°	862.5	863.5	863.7	865.5	866.3	870.3	870.1	874.4	873.1	866.5	868.8
50°	938.6	941.1	942.4	943.6	947.7	950.5	954.3	955.0	954.0	952.0	950.2
52.5°	1014.7	1020.7	1024.5	1034.7	1041.2	1046.3	1052.5	1054.9	1053.7	1053.2	1045.9
55°	1116.6	1130.8	1152.8	1167.0	1182.5	1191.6	1198.8	1202.5	1199.8	1201.1	1186.1
57.5°	1308.5	1341.8	1361.0	1385.2	1412.6	1424.0	1427.2	1440.0	1425.8	1411.6	1400.3
60°	1593.6	1624.3	1659.1	1684.1	1693.3	1724.9	1710.0	1693.3	1678.1	1648.7	1615.6
62.5°	1851.0	1890.6	1908.4	1931.7	1925.5	1922.8	1912.9	1886.3	1853.8	1810.0	1765.8
65°	1978.0	2000.2	2011.3	2018.9	2011.8	1993.5	1960.8	1921.5	1874.9	1818.3	1760.2
67°	1983.1	1993.3	1996.9	1989.7	1973.8	1945.3	1904.0	1848.4	1791.1	1726.2	1660.8
67.5°	1974.7	1981.4	1983.2	1971.8	1953.0	1922.2	1878.1	1818.6	1757.7	1690.3	1624.6
70°	1859.7	1854.8	1838.8	1823.1	1764.3	1722.9	1646.1	1582.7	1498.2	1436.2	1366.1
72.5°	1510.9	1488.3	1472.7	1403.4	1332.4	1291.3	1208.7	1133.0	1055.8	996.9	953.8
75°	848.1	831.6	788.5	751.9	693.3	639.6	601.1	552.9	506.7	479.3	459.2
77.5°	383.2	336.0	303.5	262.4	212.0	170.4	126.5	116.9	99.7	95.4	86.0
80°	299.0	265.2	222.6	175.5	123.8	83.2	61.1	51.8	48.7	46.7	45.7
82.5°	249.5	205.6	173.0	122.8	78.6	52.8	39.8	36.0	33.7	32.0	30.5
85°	106.7	84.4	69.5	49.7	35.3	27.9	24.4	22.3	20.1	18.3	17.2
87.5°	24.9	19.2	17.5	14.9	14.0	13.9	13.7	13.0	12.2	11.2	10.1
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):**

	86°	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°
0°	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7
2.5°	262.4	262.2	261.9	261.4	261.4	260.7	258.6	257.1	255.4	254.4	253.4
5°	266.8	266.6	265.8	265.3	265.0	263.7	260.0	257.2	254.3	252.1	250.5
7.5°	274.2	273.7	273.1	272.8	271.8	270.1	264.8	260.9	256.6	253.1	250.3
10°	286.3	285.5	284.5	283.5	283.8	281.2	275.1	269.3	263.0	257.6	253.8
12.5°	301.0	301.0	300.5	299.8	298.7	295.7	287.4	280.7	273.1	266.3	263.5
15°	316.5	315.7	314.9	313.9	313.7	309.7	302.3	294.5	286.6	280.8	277.5
17.5°	329.2	329.5	328.4	328.1	327.7	323.8	315.8	308.9	303.1	297.0	291.7
20°	342.8	342.1	341.8	341.3	341.1	337.8	331.5	327.2	322.1	312.9	299.0
22.5°	357.3	356.5	356.8	355.8	355.6	353.3	348.7	347.4	339.8	320.3	296.2
25°	376.1	374.6	375.1	375.1	375.3	373.1	372.6	370.3	351.2	318.5	285.0
27.5°	398.6	399.2	399.2	399.1	397.9	398.6	400.9	392.9	355.1	308.9	268.1
30°	427.8	428.1	428.4	429.6	427.1	431.4	434.2	409.0	352.2	295.7	247.0
32.5°	463.3	462.0	462.6	463.3	464.1	468.6	466.9	417.1	343.4	277.7	220.7
35°	502.4	504.9	505.6	507.0	508.7	515.5	496.5	418.7	330.0	253.6	187.2
37.5°	560.7	564.7	564.7	569.9	566.8	575.1	522.9	414.7	309.7	220.1	149.4
40°	634.2	636.0	637.8	638.5	636.8	635.8	540.2	405.0	281.2	178.0	109.3
42.5°	709.1	708.5	708.6	709.8	705.3	686.7	551.0	388.0	245.7	132.9	78.4
45°	789.9	787.1	786.2	783.9	780.0	740.7	557.1	364.1	199.0	93.4	61.6
47.5°	868.5	865.0	859.7	853.3	845.7	784.1	556.4	333.0	152.6	66.9	54.3
50°	949.0	942.9	931.5	925.2	912.4	827.2	552.6	298.5	109.8	55.3	50.9
52.5°	1041.2	1030.3	1019.7	1007.1	985.8	880.2	546.8	259.7	80.1	50.7	48.5
55°	1178.5	1160.7	1143.4	1117.3	1096.6	951.2	537.1	217.9	63.2	48.9	47.2
57.5°	1367.9	1337.5	1315.6	1280.4	1247.4	1049.4	526.7	180.0	56.5	48.4	46.6
60°	1581.0	1535.3	1494.4	1451.1	1413.5	1172.1	521.2	150.2	55.0	48.9	46.7
62.5°	1714.8	1660.8	1609.6	1556.8	1502.6	1230.7	497.6	129.8	55.6	51.0	48.0
65°	1697.9	1638.3	1582.7	1518.3	1467.3	1175.4	437.5	109.8	56.8	54.8	51.7
67°	1584.3	1526.6	1463.2	1400.1	1350.6	1070.2	369.3	92.5	58.1	59.1	55.6
67.5°	1554.0	1488.9	1425.0	1367.1	1313.4	1037.7	351.5	88.2	58.4	60.3	57.0
70°	1295.9	1244.4	1169.6	1126.7	1087.9	841.2	262.2	68.5	59.4	65.4	63.2
72.5°	906.8	856.9	817.8	794.3	771.7	611.2	184.4	54.6	58.0	68.2	66.0
75°	458.0	446.6	432.9	425.3	425.6	355.3	111.1	46.6	54.5	65.4	59.9
77.5°	90.5	88.2	89.2	97.6	96.1	109.5	55.1	39.5	46.4	50.4	43.1
80°	43.8	42.3	40.9	40.6	39.8	38.1	34.7	32.9	37.6	33.2	28.6
82.5°	28.4	26.7	26.1	24.8	24.9	27.1	30.2	31.5	30.5	22.9	19.3
85°	16.0	15.9	15.5	15.9	16.5	21.6	32.4	29.6	24.6	16.2	14.5
87.5°	9.6	9.1	9.2	9.4	9.7	16.0	25.6	21.3	15.7	8.4	8.6
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):**

	155°	165°	175°	180°
0°	260.7	260.7	260.7	260.7
2.5°	253.3	252.6	252.6	252.4
5°	249.1	248.2	248.0	248.0
7.5°	248.5	247.2	247.0	246.5
10°	251.5	251.0	251.1	250.6
12.5°	260.9	261.5	262.2	262.2
15°	275.2	274.7	275.6	274.7
17.5°	285.8	281.5	280.5	280.0
20°	286.1	277.2	274.2	273.7
22.5°	275.9	262.7	257.7	256.9
25°	258.6	241.9	235.6	234.9
27.5°	236.8	218.1	208.9	208.5
30°	210.5	188.4	176.7	174.8
32.5°	178.5	152.2	139.8	135.9
35°	141.5	114.6	103.0	102.7
37.5°	105.7	84.7	77.3	76.9
40°	77.4	66.5	63.7	63.2
42.5°	63.2	58.8	57.6	57.1
45°	56.6	54.8	54.2	53.7
47.5°	52.7	51.5	51.0	51.0
50°	49.5	49.2	48.9	48.9
52.5°	47.4	47.2	46.9	46.7
55°	45.6	44.9	45.1	44.9
57.5°	44.4	43.4	43.4	43.4
60°	43.8	41.9	41.9	42.1
62.5°	43.9	41.1	40.9	40.9
65°	45.2	40.6	39.6	39.8
67°	46.9	40.1	38.1	38.0
67.5°	47.4	39.8	37.6	37.5
70°	49.4	38.8	35.2	34.8
72.5°	49.7	37.3	32.7	32.4
75°	46.2	35.3	30.7	29.9
77.5°	36.0	30.4	27.7	27.7
80°	25.3	23.3	19.8	19.6
82.5°	18.5	17.5	14.5	14.2
85°	13.5	12.7	10.7	10.7
87.5°	8.4	8.1	6.9	6.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)