

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: FAIL-SAFE

Report Number: P392617

Luminaire Tested: **MWL-3-53-25-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392617  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-13 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-53-25-UNV-L935-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

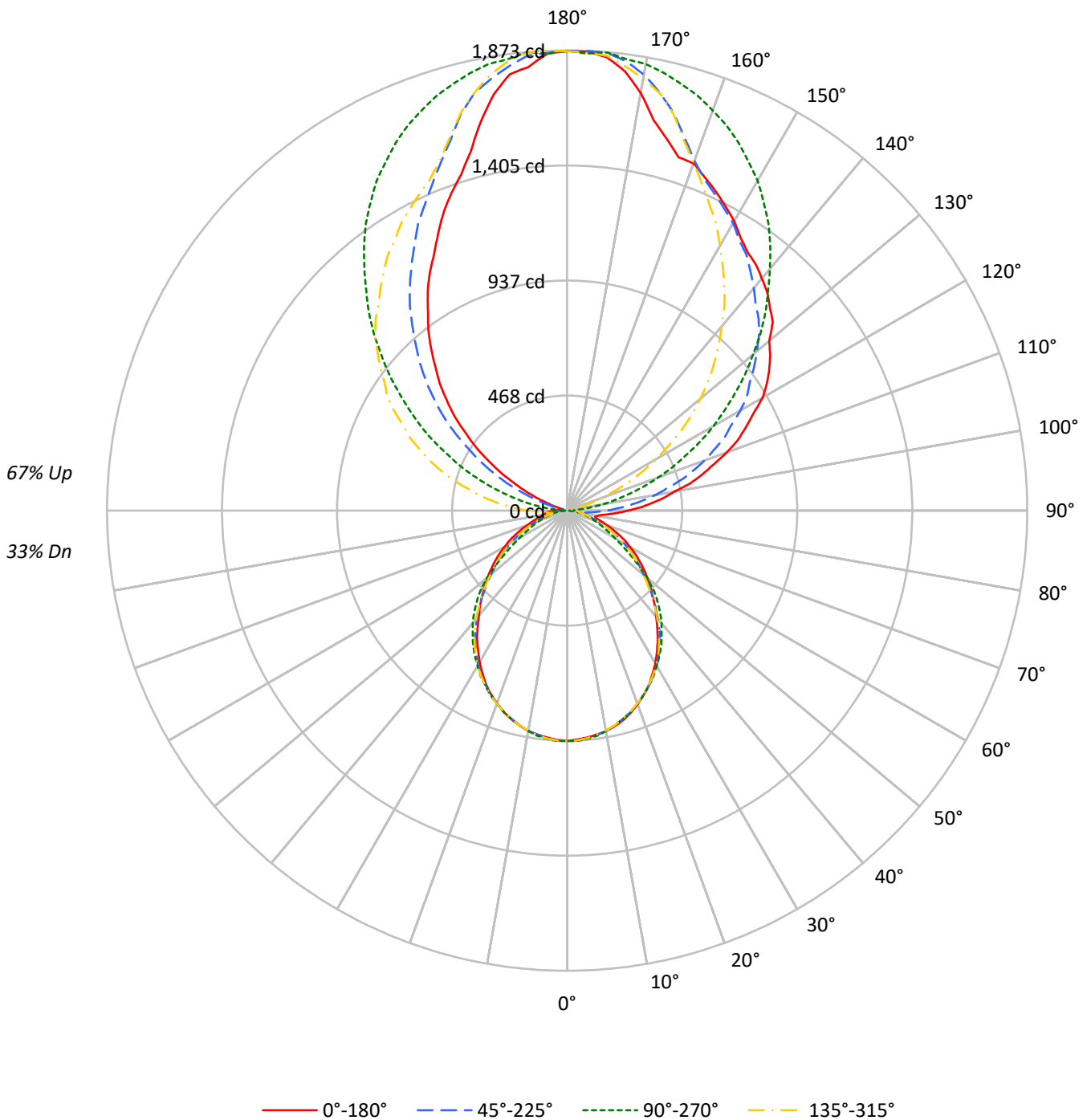
Lumens per Lamp: N/A  
Luminaire Lumens: 6625.4 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.16 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Semi-Indirect

Input Watts (W): 94.536  
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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CATALOG NUMBER: MWL-3-53-25-UNV-L935-EDD

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	82	84	81	78	75	65	62	60	49	48	47	36	35	34	28
2	86	79	73	68	77	71	66	62	57	53	50	44	41	39	32	30	29	23
3	78	69	62	57	70	63	57	52	50	46	42	39	36	33	28	26	25	20
4	72	61	54	48	64	56	49	44	45	40	36	35	31	29	25	23	22	17
5	66	55	47	41	59	50	43	38	40	35	31	31	28	25	23	21	19	15
6	61	49	41	36	54	44	38	33	36	31	27	28	25	22	21	18	17	14
7	56	44	36	31	50	40	33	29	33	28	24	26	22	19	19	17	15	12
8	52	40	33	27	47	36	30	25	30	25	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	23	27	22	19	22	18	16	16	14	12	10
10	45	33	26	22	41	30	24	20	25	20	17	20	16	14	15	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	8076	8076	8076	8076
5°	7918	7411	7918	7411
10°	7775	6776	7775	6776
15°	7588	6176	7554	6176
20°	7316	5625	7282	5625
25°	7004	5096	6968	5096
30°	6607	4599	6559	4599
35°	6158	4128	6119	4128
40°	5677	3653	5624	3653
45°	5262	3160	5220	3160
50°	4896	2587	4850	2587
55°	4514	1928	4480	1928
60°	4100	1415	4081	1415
65°	3644	1072	3644	1072
70°	3107	793	3133	793
75°	2715	576	2803	576
80°	3437	376	2741	376
85°	6472	166	3188	166



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.2	1.3
10°-20°	247.5	3.7
20°-30°	361.4	5.5
30°-40°	408.5	6.2
40°-50°	382.4	5.8
50°-60°	302.1	4.6
60°-70°	197.8	3.0
70°-80°	104.1	1.6
80°-90°	78.4	1.2
90°-100°	144.1	2.2
100°-110°	288.7	4.4
110°-120°	496.4	7.5
120°-130°	674.4	10.2
130°-140°	769.5	11.6
140°-150°	767.8	11.6
150°-160°	668.6	10.1
160°-170°	470.4	7.1
170°-180°	175.2	2.6
0°-30°	697.1	10.5
0°-40°	1105.5	16.7
0°-60°	1790.0	27.0
0°-90°	2170.2	32.8
90°-120°	929.2	14.0
90°-150°	3140.9	47.4
90°-180°	4455.0	67.2
0°-180°	6625.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	938	938	938	938	938	
5°	927	932	927	932	927	88
15°	883	878	879	878	883	248
25°	785	786	781	786	785	360
35°	643	668	639	668	643	401
45°	492	519	488	519	492	381
55°	360	312	358	312	360	323
65°	232	165	232	165	232	231
75°	124	82	128	82	124	141
85°	170	21	84	21	170	129
90°	247	1	49	1	247	137
95°	345	54	32	54	345	303
105°	570	261	14	261	570	601
115°	802	533	184	533	802	796
125°	1005	836	456	836	1005	897
135°	1167	1141	734	1141	1167	901
145°	1282	1428	987	1428	1282	808
155°	1433	1651	1242	1651	1433	661
165°	1566	1797	1515	1797	1566	444
175°	1852	1871	1812	1871	1852	173
180°	1870	1870	1870	1870	1870	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	937.9	937.9	937.9	937.9	937.9	937.9	937.9	937.9	937.9	937.9	937.9
2.5°	932.2	936.5	935.8	938.0	938.8	936.7	935.8	936.5	933.6	936.5	935.8
5°	927.1	931.4	931.6	931.6	932.4	931.6	930.2	931.4	927.1	931.4	930.2
7.5°	919.9	923.5	921.7	924.0	924.8	922.6	920.4	922.1	919.9	922.1	920.4
10°	911.0	911.6	910.7	911.6	911.6	910.2	909.4	909.0	911.0	909.0	909.4
12.5°	898.5	896.3	894.9	896.6	895.3	896.6	894.9	893.7	895.8	893.7	894.9
15°	882.8	880.2	878.0	879.7	878.4	878.4	876.7	877.6	878.9	877.6	876.7
17.5°	862.5	859.9	858.5	859.8	859.8	859.8	857.2	858.5	858.5	858.5	857.2
20°	838.7	839.2	836.4	838.6	837.2	837.2	835.2	836.4	834.8	836.4	835.2
22.5°	812.0	813.7	812.7	814.0	813.5	812.6	811.4	811.0	809.3	811.0	811.4
25°	784.9	784.0	786.9	789.4	786.4	788.0	784.3	780.1	780.9	780.1	784.3
27.5°	751.0	756.1	758.9	762.6	760.9	761.4	756.3	752.0	746.9	752.0	756.3
30°	717.8	720.4	728.9	733.5	729.5	730.9	724.9	716.5	712.5	716.5	724.9
32.5°	679.7	684.8	694.1	702.1	699.5	699.5	690.1	679.4	674.4	679.4	690.1
35°	642.8	644.4	656.3	668.1	667.6	664.2	652.4	640.4	638.7	640.4	652.4
37.5°	602.9	604.5	618.2	632.6	631.6	628.6	614.1	600.6	598.9	600.6	614.1
40°	563.9	564.7	575.7	593.9	597.7	591.3	570.5	559.5	558.6	559.5	570.5
42.5°	530.0	524.0	531.1	553.2	559.6	550.5	527.2	518.8	524.7	518.8	527.2
45°	492.1	485.4	489.6	510.0	518.9	507.3	484.3	481.4	488.2	481.4	484.3
47.5°	458.2	449.7	448.9	462.9	476.4	461.5	443.6	445.9	454.3	445.9	443.6
50°	426.0	415.8	408.2	417.9	423.3	415.3	402.9	410.6	422.0	410.6	402.9
52.5°	393.7	383.6	371.3	373.8	366.6	371.2	367.3	378.3	389.9	378.3	367.3
55°	360.3	351.8	337.4	328.3	311.9	325.7	333.3	347.7	357.6	347.7	333.3
57.5°	328.9	322.1	304.3	285.1	265.2	282.5	300.3	318.1	326.3	318.1	300.3
60°	295.3	291.9	268.2	240.6	224.4	239.2	265.5	289.2	294.0	289.2	265.5
62.5°	265.6	259.6	234.2	202.4	190.9	201.1	231.6	257.1	264.3	257.1	231.6
65°	232.1	227.9	199.1	171.0	165.4	169.7	197.7	226.5	232.1	226.5	197.7
67.5°	202.4	194.0	170.2	140.0	140.0	140.0	168.9	192.6	202.4	192.6	168.9
70°	170.5	162.1	140.0	117.1	118.0	117.1	140.0	163.4	171.9	163.4	140.0
72.5°	145.9	133.2	114.6	96.0	98.0	94.7	114.6	134.6	148.6	134.6	114.6
75°	123.9	108.6	90.4	77.7	81.9	77.7	91.6	110.0	127.9	110.0	91.6
77.5°	115.9	92.7	70.9	60.7	65.8	60.7	72.1	88.8	110.5	88.8	72.1
80°	123.9	96.0	59.5	46.3	50.6	46.3	56.9	74.8	98.8	74.8	56.9
82.5°	139.5	114.0	65.2	33.6	35.3	33.6	49.4	66.4	89.3	66.4	49.4
85°	169.5	144.4	86.6	29.0	20.9	26.4	48.3	63.7	83.5	63.7	48.3
87.5°	205.9	186.4	119.1	43.7	6.0	25.3	43.7	59.6	69.9	59.6	43.7
90°	247.3	230.7	161.5	65.6	1.4	15.4	30.7	44.4	49.1	44.4	30.7
92.5°	297.9	280.3	205.3	101.4	22.0	10.3	24.3	35.8	38.8	35.8	24.3
95°	345.1	335.5	257.1	139.1	53.7	7.0	19.2	28.9	32.0	28.9	19.2
97.5°	397.3	389.0	309.3	185.8	94.7	16.7	17.3	25.6	27.3	25.6	17.3
100°	442.8	439.9	363.6	242.6	144.9	44.4	13.5	25.0	26.7	25.0	13.5
102.5°	513.2	494.8	414.5	296.8	199.1	82.8	20.7	19.1	21.7	19.1	20.7
105°	570.5	549.6	479.2	353.6	261.1	134.4	52.4	18.4	14.3	18.4	52.4
107.5°	624.0	610.8	537.3	411.8	327.2	193.8	97.2	50.6	32.0	50.6	97.2
110°	690.1	674.2	594.1	469.9	396.0	257.2	148.9	92.8	71.7	92.8	148.9



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CATALOG NUMBER: MWL-3-53-25-UNV-L935-EDD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	753.5	741.7	647.0	530.7	467.3	325.9	212.3	145.7	125.9	145.7	212.3
115°	802.4	795.9	707.8	587.5	533.4	403.8	282.3	207.9	184.1	207.9	282.3
117.5°	853.9	852.6	752.6	645.6	612.7	473.9	347.1	269.9	244.8	269.9	347.1
120°	918.7	908.1	814.8	703.8	687.9	547.9	418.3	341.3	316.2	341.3	418.3
122.5°	963.7	957.0	867.6	759.3	759.3	623.2	487.1	410.0	383.6	410.0	487.1
125°	1004.6	1001.9	907.3	814.8	835.9	693.2	563.7	485.3	456.2	485.3	563.7
127.5°	1041.6	1045.6	958.9	875.5	913.9	764.6	639.0	552.7	522.3	552.7	639.0
130°	1073.3	1086.6	1007.7	931.1	987.9	842.5	706.5	620.1	600.2	620.1	706.5
132.5°	1135.4	1127.5	1058.7	987.9	1067.1	913.9	778.6	687.5	665.0	687.5	778.6
135°	1167.1	1169.7	1102.4	1036.8	1141.2	985.2	846.0	756.2	733.7	756.2	846.0
137.5°	1205.5	1197.4	1135.9	1096.2	1209.9	1053.9	911.2	828.8	793.2	828.8	911.2
140°	1233.2	1231.8	1181.6	1149.9	1283.9	1122.1	979.5	894.9	861.9	894.9	979.5
142.5°	1262.3	1270.1	1226.5	1207.2	1357.9	1192.7	1052.1	959.6	928.0	959.6	1052.1
145°	1282.0	1299.2	1271.5	1280.7	1427.8	1272.8	1115.6	1021.8	987.4	1021.8	1115.6
147.5°	1315.1	1337.6	1304.4	1332.3	1488.7	1342.8	1179.0	1086.6	1056.1	1086.6	1179.0
150°	1360.0	1370.5	1350.8	1403.6	1550.7	1420.8	1243.8	1148.6	1118.2	1148.6	1243.8
152.5°	1395.7	1408.9	1385.6	1480.7	1599.6	1491.4	1314.2	1209.4	1173.7	1209.4	1314.2
155°	1432.7	1437.9	1422.1	1556.0	1651.2	1561.3	1371.9	1276.7	1242.4	1276.7	1371.9
157.5°	1467.0	1477.5	1459.1	1612.8	1696.1	1622.1	1436.6	1344.1	1313.8	1344.1	1436.6
160°	1504.0	1504.0	1514.6	1679.7	1733.0	1675.8	1505.4	1418.1	1375.9	1418.1	1505.4
162.5°	1508.0	1532.3	1590.0	1726.1	1769.6	1722.1	1579.4	1470.2	1434.0	1470.2	1579.4
165°	1566.1	1587.7	1674.5	1767.0	1797.3	1763.0	1670.5	1557.4	1514.6	1557.4	1670.5
167.5°	1626.9	1673.7	1743.1	1813.2	1823.7	1801.4	1740.6	1661.8	1622.9	1661.8	1740.6
170°	1725.2	1766.2	1801.4	1830.4	1845.0	1831.7	1784.1	1745.0	1719.8	1745.0	1784.1
172.5°	1803.1	1829.5	1843.6	1862.1	1852.8	1847.6	1823.7	1804.4	1791.3	1804.4	1823.7
175°	1852.0	1857.3	1870.1	1863.4	1871.3	1856.8	1858.2	1866.5	1812.3	1866.5	1858.2
177.5°	1869.2	1878.4	1872.7	1860.8	1862.1	1859.5	1864.7	1869.2	1861.3	1869.2	1864.7
180°	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1



TEST NUMBER: P392617

CATALOG NUMBER: MWL-3-53-25-UNV-L935-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	937.9	937.9	937.9	937.9	937.9	937.9
2.5°	936.7	938.8	938.0	935.8	936.5	932.2
5°	931.6	932.4	931.6	931.6	931.4	927.1
7.5°	922.6	924.8	924.0	921.7	923.5	919.9
10°	910.2	911.6	911.6	910.7	911.6	911.0
12.5°	896.6	895.3	896.6	894.9	896.3	898.5
15°	878.4	878.4	879.7	878.0	880.2	882.8
17.5°	859.8	859.8	859.8	858.5	859.9	862.5
20°	837.2	837.2	838.6	836.4	839.2	838.7
22.5°	812.6	813.5	814.0	812.7	813.7	812.0
25°	788.0	786.4	789.4	786.9	784.0	784.9
27.5°	761.4	760.9	762.6	758.9	756.1	751.0
30°	730.9	729.5	733.5	728.9	720.4	717.8
32.5°	699.5	699.5	702.1	694.1	684.8	679.7
35°	664.2	667.6	668.1	656.3	644.4	642.8
37.5°	628.6	631.6	632.6	618.2	604.5	602.9
40°	591.3	597.7	593.9	575.7	564.7	563.9
42.5°	550.5	559.6	553.2	531.1	524.0	530.0
45°	507.3	518.9	510.0	489.6	485.4	492.1
47.5°	461.5	476.4	462.9	448.9	449.7	458.2
50°	415.3	423.3	417.9	408.2	415.8	426.0
52.5°	371.2	366.6	373.8	371.3	383.6	393.7
55°	325.7	311.9	328.3	337.4	351.8	360.3
57.5°	282.5	265.2	285.1	304.3	322.1	328.9
60°	239.2	224.4	240.6	268.2	291.9	295.3
62.5°	201.1	190.9	202.4	234.2	259.6	265.6
65°	169.7	165.4	171.0	199.1	227.9	232.1
67.5°	140.0	140.0	140.0	170.2	194.0	202.4
70°	117.1	118.0	117.1	140.0	162.1	170.5
72.5°	94.7	98.0	96.0	114.6	133.2	145.9
75°	77.7	81.9	77.7	90.4	108.6	123.9
77.5°	60.7	65.8	60.7	70.9	92.7	115.9
80°	46.3	50.6	46.3	59.5	96.0	123.9
82.5°	33.6	35.3	33.6	65.2	114.0	139.5
85°	26.4	20.9	29.0	86.6	144.4	169.5
87.5°	25.3	6.0	43.7	119.1	186.4	205.9
90°	15.4	1.4	65.6	161.5	230.7	247.3
92.5°	10.3	22.0	101.4	205.3	280.3	297.9
95°	7.0	53.7	139.1	257.1	335.5	345.1
97.5°	16.7	94.7	185.8	309.3	389.0	397.3
100°	44.4	144.9	242.6	363.6	439.9	442.8
102.5°	82.8	199.1	296.8	414.5	494.8	513.2
105°	134.4	261.1	353.6	479.2	549.6	570.5
107.5°	193.8	327.2	411.8	537.3	610.8	624.0
110°	257.2	396.0	469.9	594.1	674.2	690.1





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	325.9	467.3	530.7	647.0	741.7	753.5
115°	403.8	533.4	587.5	707.8	795.9	802.4
117.5°	473.9	612.7	645.6	752.6	852.6	853.9
120°	547.9	687.9	703.8	814.8	908.1	918.7
122.5°	623.2	759.3	759.3	867.6	957.0	963.7
125°	693.2	835.9	814.8	907.3	1001.9	1004.6
127.5°	764.6	913.9	875.5	958.9	1045.6	1041.6
130°	842.5	987.9	931.1	1007.7	1086.6	1073.3
132.5°	913.9	1067.1	987.9	1058.7	1127.5	1135.4
135°	985.2	1141.2	1036.8	1102.4	1169.7	1167.1
137.5°	1053.9	1209.9	1096.2	1135.9	1197.4	1205.5
140°	1122.1	1283.9	1149.9	1181.6	1231.8	1233.2
142.5°	1192.7	1357.9	1207.2	1226.5	1270.1	1262.3
145°	1272.8	1427.8	1280.7	1271.5	1299.2	1282.0
147.5°	1342.8	1488.7	1332.3	1304.4	1337.6	1315.1
150°	1420.8	1550.7	1403.6	1350.8	1370.5	1360.0
152.5°	1491.4	1599.6	1480.7	1385.6	1408.9	1395.7
155°	1561.3	1651.2	1556.0	1422.1	1437.9	1432.7
157.5°	1622.1	1696.1	1612.8	1459.1	1477.5	1467.0
160°	1675.8	1733.0	1679.7	1514.6	1504.0	1504.0
162.5°	1722.1	1769.6	1726.1	1590.0	1532.3	1508.0
165°	1763.0	1797.3	1767.0	1674.5	1587.7	1566.1
167.5°	1801.4	1823.7	1813.2	1743.1	1673.7	1626.9
170°	1831.7	1845.0	1830.4	1801.4	1766.2	1725.2
172.5°	1847.6	1852.8	1862.1	1843.6	1829.5	1803.1
175°	1856.8	1871.3	1863.4	1870.1	1857.3	1852.0
177.5°	1859.5	1862.1	1860.8	1872.7	1878.4	1869.2
180°	1870.1	1870.1	1870.1	1870.1	1870.1	1870.1

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