

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: P392563

Luminaire Tested: **MWL-3-27-25-UNV-L835-EDD**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P392563  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &  
Test Lab: INNOVATION CENTER  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-27-25-UNV-L835-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

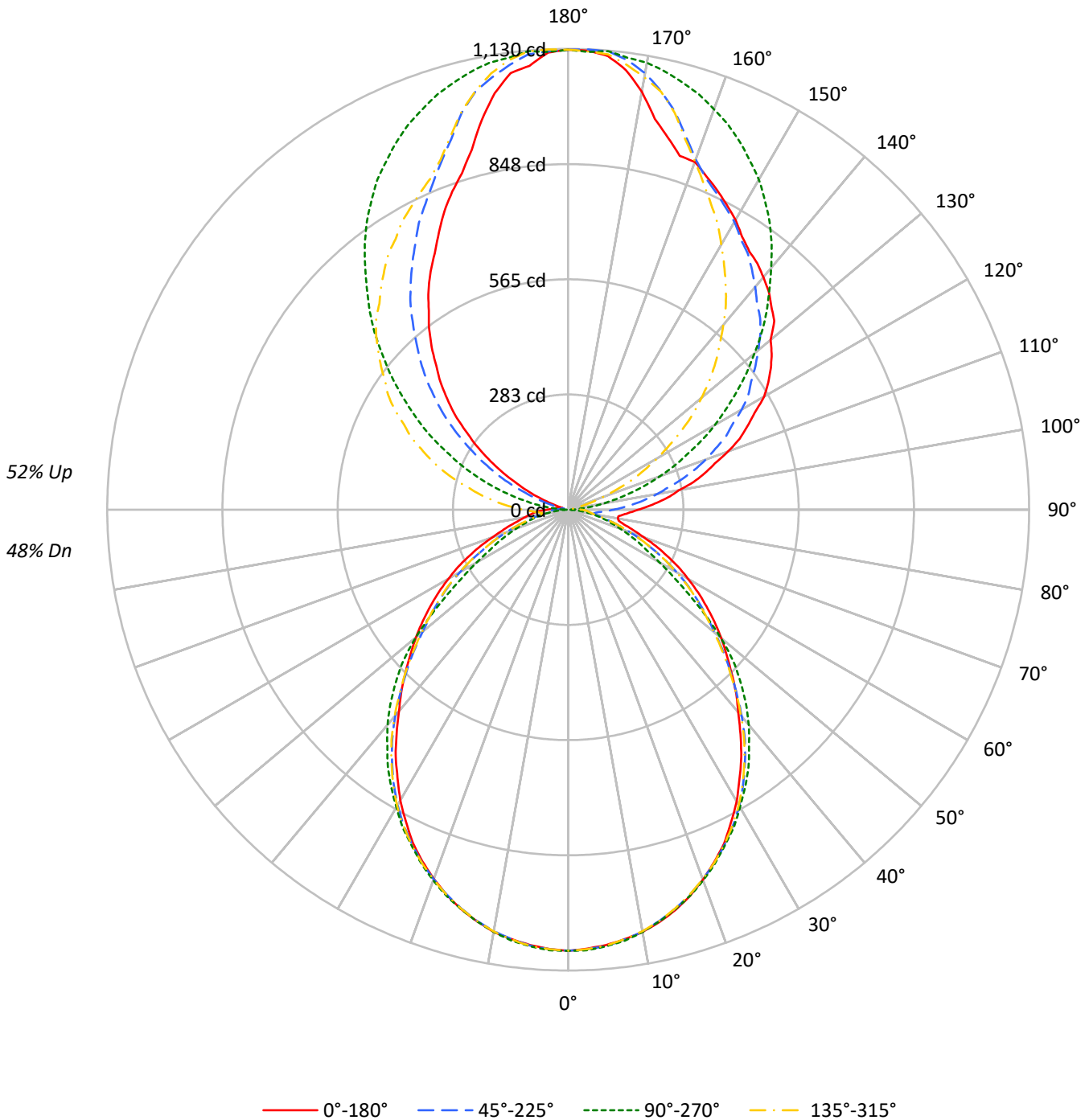
Lumens per Lamp: N/A  
Luminaire Lumens: 5178.0 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 49.2  
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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### Luminous Intensity Polar Plot





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

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48						48														
1	97	93	89	86	89	86	83	80	72	70	68	60	58	56	48	47	46	41						41														
2	89	82	76	71	82	75	70	66	64	60	57	53	50	48	43	41	39	34						34														
3	81	72	65	59	75	67	60	55	56	52	48	47	44	41	38	36	34	30						30														
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26						26														
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23						23														
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20						20														
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18						18														
8	54	42	35	29	50	39	33	28	34	28	25	29	25	21	24	21	18	16						16														
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	15						15														
10	47	35	28	24	44	33	27	22	29	24	20	24	20	18	21	17	15	13						13														

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

	0°	90°	180°	270°
0°	9314	9314	9314	9314
5°	9149	8541	9149	8541
10°	8973	7814	8973	7814
15°	8736	7131	8715	7131
20°	8420	6497	8399	6497
25°	8063	5885	8042	5885
30°	7603	5310	7573	5310
35°	7086	4765	7063	4765
40°	6527	4211	6494	4211
45°	6051	3639	6025	3639
50°	5624	2980	5595	2980
55°	5184	2220	5163	2220
60°	4709	1626	4698	1626
65°	4187	1232	4187	1232
70°	3574	908	3588	908
75°	3114	662	3166	662
80°	3431	430	3013	430
85°	5193	186	3219	186



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.7	2.0
10°-20°	285.6	5.5
20°-30°	416.8	8.0
30°-40°	470.7	9.1
40°-50°	440.5	8.5
50°-60°	347.7	6.7
60°-70°	227.3	4.4
70°-80°	118.4	2.3
80°-90°	70.8	1.4
90°-100°	95.8	1.8
100°-110°	175.6	3.4
110°-120°	299.8	5.8
120°-130°	407.0	7.9
130°-140°	464.3	9.0
140°-150°	463.2	8.9
150°-160°	403.3	7.8
160°-170°	283.7	5.5
170°-180°	105.7	2.0
0°-30°	804.1	15.5
0°-40°	1274.9	24.6
0°-60°	2063.0	39.8
0°-90°	2479.6	47.9
90°-120°	571.2	11.0
90°-150°	1905.7	36.8
90°-180°	2698.0	52.1
0°-180°	5178.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1082	1082	1082	1082	1082	
5°	1071	1074	1071	1074	1071	102
15°	1016	1014	1014	1014	1016	286
25°	904	908	901	908	904	415
35°	740	771	737	771	740	461
45°	566	598	564	598	566	438
55°	414	359	412	359	414	370
65°	267	190	267	190	267	265
75°	142	94	144	94	142	157
85°	136	23	84	23	136	108
90°	171	1	52	1	171	95
95°	224	33	35	33	224	194
105°	347	158	12	158	347	366
115°	485	322	112	322	485	481
125°	606	504	276	504	606	541
135°	704	688	443	688	704	544
145°	774	861	596	861	774	488
155°	864	996	750	996	864	399
165°	945	1084	914	1084	945	268
175°	1117	1129	1093	1129	1117	104
180°	1128	1128	1128	1128	1128	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6
2.5°	1077.2	1080.8	1078.5	1080.2	1081.2	1079.5	1078.5	1080.8	1078.1	1080.8	1078.5
5°	1071.3	1074.9	1073.6	1073.6	1074.5	1073.6	1072.8	1074.9	1071.3	1074.9	1072.8
7.5°	1062.4	1064.9	1062.9	1064.7	1065.7	1063.9	1062.2	1064.1	1062.4	1064.1	1062.2
10°	1051.3	1051.2	1050.2	1051.2	1051.2	1050.4	1049.4	1049.6	1051.3	1049.6	1049.4
12.5°	1035.2	1033.5	1032.7	1034.6	1033.9	1034.6	1032.7	1031.9	1033.7	1031.9	1032.7
15°	1016.4	1014.8	1013.0	1015.0	1014.2	1014.2	1012.2	1013.2	1014.0	1013.2	1012.2
17.5°	992.8	991.2	990.4	992.6	992.6	992.6	989.6	990.4	990.4	990.4	989.6
20°	965.3	966.4	964.9	968.0	967.1	967.1	964.1	964.9	962.9	964.9	964.1
22.5°	935.0	937.0	937.4	939.5	939.6	938.6	936.6	935.4	933.4	935.4	936.6
25°	903.6	902.6	906.7	911.0	908.2	910.1	905.1	900.2	901.2	900.2	905.1
27.5°	864.3	870.1	874.3	879.4	878.7	878.6	872.7	867.8	861.9	867.8	872.7
30°	825.9	828.9	838.7	844.8	842.3	843.2	836.3	826.5	822.7	826.5	836.3
32.5°	781.7	787.6	798.4	808.4	806.9	806.9	796.1	784.4	778.5	784.4	796.1
35°	739.6	741.6	755.4	769.1	770.6	766.7	752.9	739.2	737.2	739.2	752.9
37.5°	693.5	695.4	711.2	727.9	728.3	725.4	708.7	693.0	691.0	693.0	708.7
40°	648.3	649.2	662.0	683.8	688.9	682.2	658.8	646.0	645.0	646.0	658.8
42.5°	609.0	602.1	611.1	636.7	644.7	635.0	608.7	598.8	605.7	598.8	608.7
45°	565.9	558.1	563.0	586.6	597.6	584.9	559.7	555.6	563.5	555.6	559.7
47.5°	526.6	516.8	515.8	532.7	548.4	531.8	512.6	514.3	524.2	514.3	512.6
50°	489.3	477.5	468.6	480.6	487.6	478.9	465.4	474.2	486.8	474.2	465.4
52.5°	451.9	440.1	426.6	429.5	421.8	427.9	424.1	436.9	449.5	436.9	424.1
55°	413.8	404.0	387.3	377.5	359.1	376.0	384.8	401.5	412.1	401.5	384.8
57.5°	377.4	369.6	348.9	327.4	305.0	325.9	346.5	367.1	375.8	367.1	346.5
60°	339.2	335.3	307.8	276.5	257.9	275.7	306.2	333.7	338.4	333.7	306.2
62.5°	304.8	297.9	268.5	232.3	219.7	231.5	266.9	296.4	304.0	296.4	266.9
65°	266.7	261.8	228.4	195.9	190.2	195.2	227.6	261.0	266.7	261.0	227.6
67.5°	232.3	222.5	195.0	160.8	160.8	160.8	194.2	221.7	232.3	221.7	194.2
70°	196.1	186.3	160.8	134.2	135.2	134.2	160.8	187.1	196.9	187.1	160.8
72.5°	167.6	152.9	131.3	109.7	112.8	108.9	131.3	153.7	169.2	153.7	131.3
75°	142.1	124.4	104.0	89.2	94.1	89.2	104.8	125.2	144.5	125.2	104.8
77.5°	126.9	103.1	81.4	69.6	75.5	69.6	82.2	100.6	123.7	100.6	82.2
80°	123.7	96.5	66.0	52.9	57.8	52.9	64.5	83.7	108.6	83.7	64.5
82.5°	124.1	101.2	63.9	38.1	40.1	38.1	54.2	72.6	93.8	72.6	54.2
85°	136.0	114.3	72.5	30.7	23.4	29.1	49.4	65.7	84.3	65.7	49.4
87.5°	151.9	135.9	88.7	36.8	6.9	25.6	43.3	59.5	70.0	59.5	43.3
90°	171.2	159.3	111.5	46.6	0.8	16.3	32.6	47.1	51.8	47.1	32.6
92.5°	197.4	185.9	135.0	65.3	13.8	10.4	25.9	38.5	41.4	38.5	25.9
95°	223.6	216.8	163.4	84.8	32.8	5.1	20.0	32.0	34.8	32.0	20.0
97.5°	251.7	245.8	191.5	112.4	57.5	10.5	15.6	26.7	28.7	26.7	15.6
100°	275.8	273.1	221.5	146.7	87.8	27.2	10.5	23.1	25.1	23.1	10.5
102.5°	315.3	302.9	250.2	179.3	120.5	50.3	13.0	16.2	19.2	16.2	13.0
105°	346.7	332.6	289.2	213.6	157.8	81.4	32.0	12.5	11.5	12.5	32.0
107.5°	377.0	369.1	324.3	248.6	197.7	117.2	59.2	31.4	20.2	31.4	59.2
110°	416.8	407.3	358.5	283.7	239.1	155.5	90.2	56.9	44.1	56.9	90.2



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CATALOG NUMBER: MWL-3-27-25-UNV-L835-EDD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	455.1	447.9	390.4	320.2	282.0	196.8	128.4	88.7	76.8	88.7	128.4
115°	484.6	480.5	427.0	354.5	321.9	243.9	170.6	126.2	111.8	126.2	170.6
117.5°	515.6	514.8	454.1	389.5	369.7	286.1	209.6	163.6	148.5	163.6	209.6
120°	554.6	548.2	491.5	424.6	415.1	330.7	252.6	206.7	191.5	206.7	252.6
122.5°	581.6	577.7	523.4	458.0	458.0	376.1	294.0	248.0	232.1	248.0	294.0
125°	606.3	604.7	547.2	491.5	504.2	418.2	340.2	293.4	275.9	293.4	340.2
127.5°	628.6	631.1	578.3	528.1	551.2	461.3	385.6	334.0	315.7	334.0	385.6
130°	647.8	655.7	607.8	561.6	595.8	508.2	426.2	374.6	362.7	374.6	426.2
132.5°	685.2	680.4	639.0	595.8	643.5	551.2	470.2	415.3	401.7	415.3	470.2
135°	704.3	705.8	665.3	625.3	688.2	594.2	510.8	456.6	443.1	456.6	510.8
137.5°	727.4	722.6	685.0	661.1	729.6	635.6	549.6	500.5	478.9	500.5	549.6
140°	744.1	743.3	713.0	694.0	774.1	677.3	591.3	540.3	520.3	540.3	591.3
142.5°	761.7	766.4	740.1	728.0	818.8	719.2	635.0	579.3	560.1	579.3	635.0
145°	773.6	784.0	767.2	772.8	861.0	768.0	673.2	616.7	596.0	616.7	673.2
147.5°	793.5	807.1	787.1	803.8	897.6	810.2	711.4	655.7	637.4	655.7	711.4
150°	820.5	826.9	815.0	846.9	935.0	857.2	750.5	693.2	674.8	693.2	750.5
152.5°	842.0	850.0	835.5	892.8	964.5	899.2	792.5	729.7	708.3	729.7	792.5
155°	864.3	867.5	858.0	938.2	995.5	941.4	827.7	770.4	749.7	770.4	827.7
157.5°	885.1	891.4	880.3	972.4	1022.7	978.0	866.7	811.0	792.7	811.0	866.7
160°	907.4	907.4	913.7	1013.2	1045.0	1010.9	908.2	855.6	830.2	855.6	908.2
162.5°	909.7	923.9	959.1	1041.1	1067.4	1038.8	952.7	886.5	865.1	886.5	952.7
165°	944.7	957.3	1010.1	1065.8	1084.1	1063.4	1007.7	939.0	913.7	939.0	1007.7
167.5°	981.4	1009.1	1051.4	1093.7	1100.1	1086.5	1049.9	1001.9	979.0	1001.9	1049.9
170°	1040.1	1064.8	1086.5	1104.0	1112.8	1104.8	1076.1	1052.0	1036.9	1052.0	1076.1
172.5°	1087.1	1103.0	1112.0	1123.2	1117.6	1114.3	1100.1	1087.9	1079.9	1087.9	1100.1
175°	1116.6	1119.7	1127.9	1124.0	1128.7	1119.9	1120.7	1125.3	1092.7	1125.3	1120.7
177.5°	1126.9	1132.5	1129.5	1122.3	1123.2	1121.5	1124.8	1126.9	1122.2	1126.9	1124.8
180°	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6
2.5°	1079.5	1081.2	1080.2	1078.5	1080.8	1077.2
5°	1073.6	1074.5	1073.6	1073.6	1074.9	1071.3
7.5°	1063.9	1065.7	1064.7	1062.9	1064.9	1062.4
10°	1050.4	1051.2	1051.2	1050.2	1051.2	1051.3
12.5°	1034.6	1033.9	1034.6	1032.7	1033.5	1035.2
15°	1014.2	1014.2	1015.0	1013.0	1014.8	1016.4
17.5°	992.6	992.6	992.6	990.4	991.2	992.8
20°	967.1	967.1	968.0	964.9	966.4	965.3
22.5°	938.6	939.6	939.5	937.4	937.0	935.0
25°	910.1	908.2	911.0	906.7	902.6	903.6
27.5°	878.6	878.7	879.4	874.3	870.1	864.3
30°	843.2	842.3	844.8	838.7	828.9	825.9
32.5°	806.9	806.9	808.4	798.4	787.6	781.7
35°	766.7	770.6	769.1	755.4	741.6	739.6
37.5°	725.4	728.3	727.9	711.2	695.4	693.5
40°	682.2	688.9	683.8	662.0	649.2	648.3
42.5°	635.0	644.7	636.7	611.1	602.1	609.0
45°	584.9	597.6	586.6	563.0	558.1	565.9
47.5°	531.8	548.4	532.7	515.8	516.8	526.6
50°	478.9	487.6	480.6	468.6	477.5	489.3
52.5°	427.9	421.8	429.5	426.6	440.1	451.9
55°	376.0	359.1	377.5	387.3	404.0	413.8
57.5°	325.9	305.0	327.4	348.9	369.6	377.4
60°	275.7	257.9	276.5	307.8	335.3	339.2
62.5°	231.5	219.7	232.3	268.5	297.9	304.8
65°	195.2	190.2	195.9	228.4	261.8	266.7
67.5°	160.8	160.8	160.8	195.0	222.5	232.3
70°	134.2	135.2	134.2	160.8	186.3	196.1
72.5°	108.9	112.8	109.7	131.3	152.9	167.6
75°	89.2	94.1	89.2	104.0	124.4	142.1
77.5°	69.6	75.5	69.6	81.4	103.1	126.9
80°	52.9	57.8	52.9	66.0	96.5	123.7
82.5°	38.1	40.1	38.1	63.9	101.2	124.1
85°	29.1	23.4	30.7	72.5	114.3	136.0
87.5°	25.6	6.9	36.8	88.7	135.9	151.9
90°	16.3	0.8	46.6	111.5	159.3	171.2
92.5°	10.4	13.8	65.3	135.0	185.9	197.4
95°	5.1	32.8	84.8	163.4	216.8	223.6
97.5°	10.5	57.5	112.4	191.5	245.8	251.7
100°	27.2	87.8	146.7	221.5	273.1	275.8
102.5°	50.3	120.5	179.3	250.2	302.9	315.3
105°	81.4	157.8	213.6	289.2	332.6	346.7
107.5°	117.2	197.7	248.6	324.3	369.1	377.0
110°	155.5	239.1	283.7	358.5	407.3	416.8





TEST NUMBER: P392563

CATALOG NUMBER: MWL-3-27-25-UNV-L835-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	196.8	282.0	320.2	390.4	447.9	455.1
115°	243.9	321.9	354.5	427.0	480.5	484.6
117.5°	286.1	369.7	389.5	454.1	514.8	515.6
120°	330.7	415.1	424.6	491.5	548.2	554.6
122.5°	376.1	458.0	458.0	523.4	577.7	581.6
125°	418.2	504.2	491.5	547.2	604.7	606.3
127.5°	461.3	551.2	528.1	578.3	631.1	628.6
130°	508.2	595.8	561.6	607.8	655.7	647.8
132.5°	551.2	643.5	595.8	639.0	680.4	685.2
135°	594.2	688.2	625.3	665.3	705.8	704.3
137.5°	635.6	729.6	661.1	685.0	722.6	727.4
140°	677.3	774.1	694.0	713.0	743.3	744.1
142.5°	719.2	818.8	728.0	740.1	766.4	761.7
145°	768.0	861.0	772.8	767.2	784.0	773.6
147.5°	810.2	897.6	803.8	787.1	807.1	793.5
150°	857.2	935.0	846.9	815.0	826.9	820.5
152.5°	899.2	964.5	892.8	835.5	850.0	842.0
155°	941.4	995.5	938.2	858.0	867.5	864.3
157.5°	978.0	1022.7	972.4	880.3	891.4	885.1
160°	1010.9	1045.0	1013.2	913.7	907.4	907.4
162.5°	1038.8	1067.4	1041.1	959.1	923.9	909.7
165°	1063.4	1084.1	1065.8	1010.1	957.3	944.7
167.5°	1086.5	1100.1	1093.7	1051.4	1009.1	981.4
170°	1104.8	1112.8	1104.0	1086.5	1064.8	1040.1
172.5°	1114.3	1117.6	1123.2	1112.0	1103.0	1087.1
175°	1119.9	1128.7	1124.0	1127.9	1119.7	1116.6
177.5°	1121.5	1123.2	1122.3	1129.5	1132.5	1126.9
180°	1127.9	1127.9	1127.9	1127.9	1127.9	1127.9

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