

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: P392579

Luminaire Tested: **MWL-3-30-25-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392579
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-3-30-25-UNV-L840-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

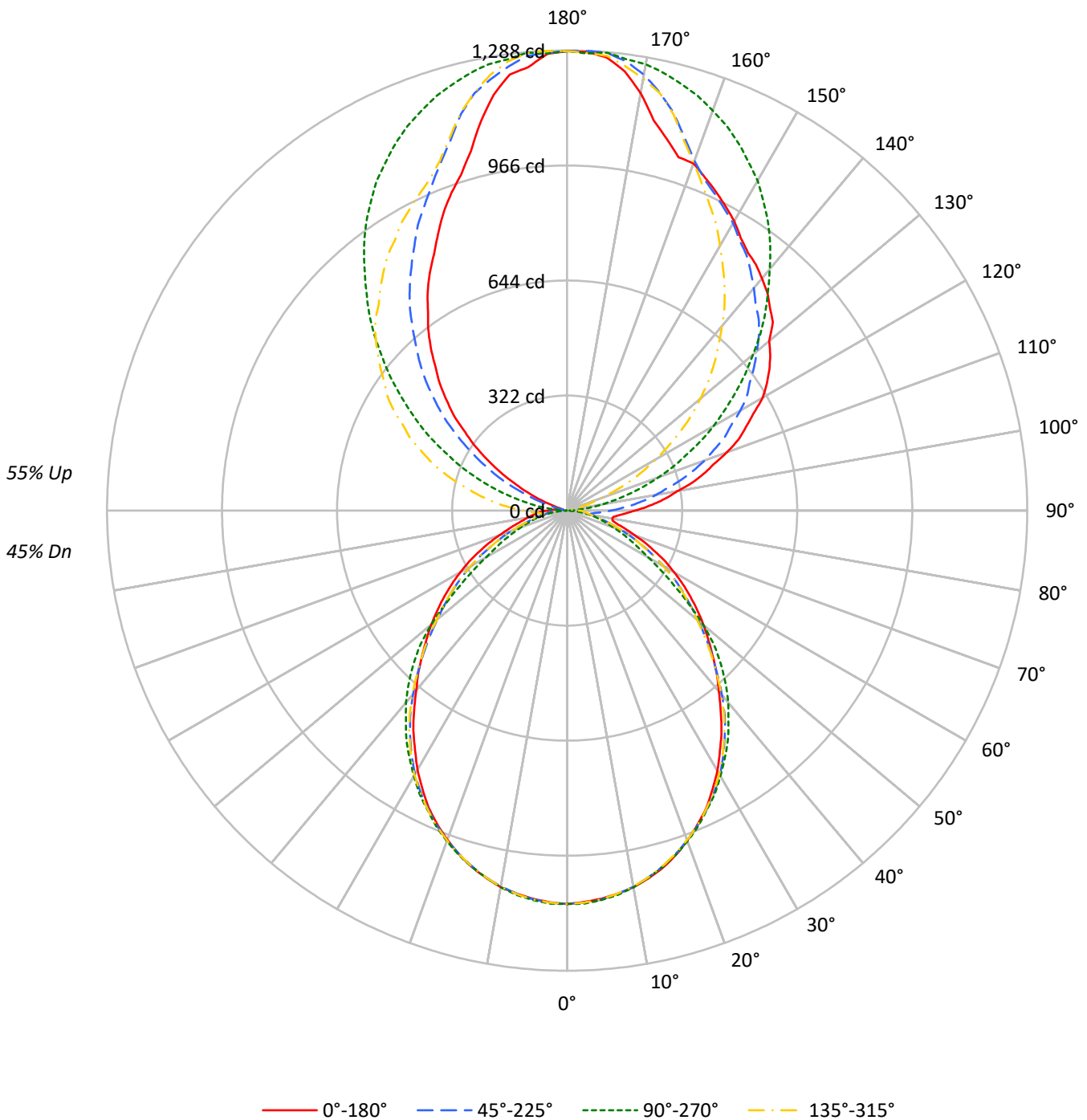
Lumens per Lamp: N/A
Luminaire Lumens: 5601.2 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 52.8
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				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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	97	93	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44	38
2	88	81	75	70	81	75	69	65	62	59	55	51	48	46	41	39	37	32
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9483	9483	9483	9483
5°	9313	8697	9313	8697
10°	9135	7956	9135	7956
15°	8897	7259	8873	7259
20°	8576	6615	8552	6615
25°	8212	5991	8187	5991
30°	7744	5406	7710	5406
35°	7218	4851	7191	4851
40°	6649	4288	6611	4288
45°	6163	3705	6134	3705
50°	5729	3035	5698	3035
55°	5281	2261	5258	2261
60°	4798	1656	4785	1656
65°	4266	1256	4266	1256
70°	3641	926	3657	926
75°	3173	674	3232	674
80°	3565	438	3087	438
85°	5594	190	3337	190



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.6	1.8
10°-20°	290.7	5.2
20°-30°	424.4	7.6
30°-40°	479.4	8.6
40°-50°	448.6	8.0
50°-60°	354.1	6.3
60°-70°	231.5	4.1
70°-80°	120.8	2.2
80°-90°	74.8	1.3
90°-100°	107.0	1.9
100°-110°	199.8	3.6
110°-120°	341.6	6.1
120°-130°	463.9	8.3
130°-140°	529.3	9.4
140°-150°	528.1	9.4
150°-160°	459.7	8.2
160°-170°	323.4	5.8
170°-180°	120.5	2.2
0°-30°	818.7	14.6
0°-40°	1298.1	23.2
0°-60°	2100.8	37.5
0°-90°	2527.9	45.1
90°-120°	648.4	11.6
90°-150°	2169.7	38.7
90°-180°	3073.0	54.9
0°-180°	5601.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1101	1101	1101	1101	1101	
5°	1090	1094	1090	1094	1090	103
15°	1035	1032	1032	1032	1035	291
25°	920	925	918	925	920	422
35°	753	785	751	785	753	470
45°	576	608	574	608	576	446
55°	422	366	420	366	422	377
65°	272	194	272	194	272	270
75°	145	96	148	96	145	161
85°	146	24	87	24	146	116
90°	190	1	53	1	190	105
95°	251	37	36	37	251	218
105°	395	180	12	180	395	416
115°	552	367	127	367	552	548
125°	691	575	314	575	691	617
135°	803	785	505	785	803	620
145°	882	982	679	982	882	556
155°	985	1135	855	1135	985	454
165°	1077	1236	1042	1236	1077	305
175°	1273	1287	1246	1287	1273	119
180°	1286	1286	1286	1286	1286	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3
2.5°	1096.5	1100.3	1098.2	1100.1	1101.1	1099.2	1098.2	1100.3	1097.4	1100.3	1098.2
5°	1090.5	1094.3	1093.2	1093.2	1094.2	1093.2	1092.3	1094.3	1090.5	1094.3	1092.3
7.5°	1081.4	1084.3	1082.3	1084.2	1085.2	1083.3	1081.3	1083.3	1081.4	1083.3	1081.3
10°	1070.3	1070.3	1069.3	1070.3	1070.3	1069.3	1068.3	1068.4	1070.3	1068.4	1068.3
12.5°	1054.2	1052.3	1051.3	1053.3	1052.4	1053.3	1051.3	1050.4	1052.3	1050.4	1051.3
15°	1035.1	1033.3	1031.3	1033.3	1032.4	1032.4	1030.4	1031.4	1032.3	1031.4	1030.4
17.5°	1011.1	1009.3	1008.3	1010.4	1010.4	1010.4	1007.4	1008.3	1008.3	1008.3	1007.4
20°	983.2	984.3	982.4	985.4	984.6	984.6	981.5	982.4	980.4	982.4	981.5
22.5°	952.3	954.3	954.4	956.5	956.6	955.6	953.5	952.4	950.4	952.4	953.5
25°	920.3	919.3	923.4	927.5	924.6	926.6	921.5	916.5	917.5	916.5	921.5
27.5°	880.3	886.3	890.4	895.4	894.6	894.5	888.5	883.5	877.5	883.5	888.5
30°	841.3	844.3	854.3	860.4	857.6	858.5	851.5	841.5	837.6	841.5	851.5
32.5°	796.3	802.3	813.3	823.4	821.5	821.5	810.5	798.6	792.6	798.6	810.5
35°	753.4	755.4	769.4	783.4	784.6	780.6	766.6	752.6	750.6	752.6	766.6
37.5°	706.4	708.4	724.4	741.4	741.5	738.6	721.6	705.6	703.6	705.6	721.6
40°	660.4	661.4	674.4	696.4	701.5	694.6	670.7	657.7	656.7	657.7	670.7
42.5°	620.4	613.4	622.4	648.4	656.5	646.6	619.7	609.7	616.7	609.7	619.7
45°	576.4	568.4	573.4	597.4	608.5	595.6	569.8	565.7	573.7	565.7	569.8
47.5°	536.4	526.4	525.4	542.5	558.5	541.6	521.8	523.7	533.7	523.7	521.8
50°	498.4	486.4	477.4	489.5	496.6	487.7	473.8	482.8	495.7	482.8	473.8
52.5°	460.4	448.4	434.5	437.5	429.6	435.7	431.8	444.8	457.7	444.8	431.8
55°	421.5	411.5	394.5	384.6	365.7	382.8	391.8	408.8	419.7	408.8	391.8
57.5°	384.5	376.5	355.5	333.6	310.7	331.8	352.8	373.8	382.7	373.8	352.8
60°	345.6	341.6	313.6	281.7	262.7	280.8	311.8	339.8	344.7	339.8	311.8
62.5°	310.6	303.6	273.6	236.7	223.8	235.8	271.8	301.8	309.7	301.8	271.8
65°	271.7	266.7	232.7	199.7	193.8	198.8	231.8	265.8	271.7	265.8	231.8
67.5°	236.7	226.7	198.7	163.8	163.8	163.8	197.8	225.8	236.7	225.8	197.8
70°	199.8	189.8	163.8	136.8	137.8	136.8	163.8	190.7	200.7	190.7	163.8
72.5°	170.8	155.8	133.8	111.8	114.9	110.9	133.8	156.7	172.6	156.7	133.8
75°	144.8	126.8	105.9	90.9	95.9	90.9	106.8	127.7	147.5	127.7	106.8
77.5°	130.1	105.4	82.9	70.9	76.9	70.9	83.8	102.7	126.4	102.7	83.8
80°	128.5	100.2	67.6	53.9	58.9	53.9	65.8	85.6	111.3	85.6	65.8
82.5°	131.3	107.1	66.5	38.9	40.9	38.9	55.6	74.4	96.8	74.4	55.6
85°	146.5	123.4	77.5	31.6	23.9	29.8	51.2	68.0	87.4	68.0	51.2
87.5°	166.1	149.0	96.8	39.3	7.0	26.5	45.1	61.8	72.6	61.8	45.1
90°	189.5	176.5	123.5	51.3	0.9	16.8	33.6	48.4	53.4	48.4	33.6
92.5°	220.5	207.6	151.1	73.5	15.5	10.8	26.7	39.6	42.5	39.6	26.7
95°	250.9	243.5	184.2	96.4	37.3	5.6	20.7	32.8	35.7	32.8	20.7
97.5°	283.9	277.3	217.1	128.1	65.5	11.9	16.4	27.6	29.6	27.6	16.4
100°	312.3	309.4	252.0	167.2	100.0	31.0	11.4	24.3	26.3	24.3	11.4
102.5°	358.0	344.1	285.2	204.4	137.2	57.3	14.6	17.3	20.3	17.3	14.6
105°	394.6	378.9	329.7	243.4	179.9	92.7	36.4	13.9	12.4	13.9	36.4
107.5°	429.6	420.6	369.6	283.4	225.3	133.6	67.3	35.6	22.9	35.6	67.3
110°	475.0	464.1	408.7	323.3	272.5	177.1	102.7	64.6	50.1	64.6	102.7



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CATALOG NUMBER: MWL-3-30-25-UNV-L840-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	518.6	510.5	445.0	365.1	321.5	224.4	146.3	101.0	87.3	101.0	146.3
115°	552.2	547.7	486.8	404.1	366.9	277.9	194.4	143.6	127.3	143.6	194.4
117.5°	587.6	586.7	517.6	444.1	421.4	326.0	238.9	186.3	169.1	186.3	238.9
120°	632.1	624.9	560.3	484.0	473.1	376.9	287.9	235.3	218.1	235.3	287.9
122.5°	663.0	658.5	596.6	522.2	522.2	428.6	335.1	282.6	264.4	282.6	335.1
125°	691.1	689.3	623.9	560.3	574.8	476.8	387.8	334.3	314.3	334.3	387.8
127.5°	716.6	719.3	659.3	602.1	628.4	525.8	439.5	380.6	359.7	380.6	439.5
130°	738.4	747.4	692.9	640.2	679.2	579.4	485.8	426.9	413.3	426.9	485.8
132.5°	781.0	775.6	728.4	679.2	733.7	628.4	535.9	473.2	457.8	473.2	535.9
135°	802.8	804.6	758.3	712.8	784.6	677.4	582.2	520.4	505.0	520.4	582.2
137.5°	829.1	823.7	780.9	753.7	831.8	724.6	626.6	570.4	545.9	570.4	626.6
140°	848.2	847.3	812.8	791.0	882.6	771.9	673.9	615.8	593.1	615.8	673.9
142.5°	868.2	873.6	843.7	830.0	933.5	820.0	723.8	660.3	638.5	660.3	723.8
145°	881.8	893.6	874.5	880.9	981.6	875.5	767.4	702.9	679.3	702.9	767.4
147.5°	904.5	919.9	897.2	916.3	1023.3	923.6	811.0	747.4	726.5	747.4	811.0
150°	935.4	942.6	929.0	965.3	1065.9	977.1	855.5	790.1	769.2	790.1	855.5
152.5°	959.9	969.0	952.5	1017.8	1099.5	1025.1	903.5	831.9	807.4	831.9	903.5
155°	985.3	988.8	978.1	1069.6	1134.9	1073.2	943.5	878.2	854.6	878.2	943.5
157.5°	1008.8	1016.1	1003.4	1108.6	1165.8	1115.0	987.9	924.5	903.6	924.5	987.9
160°	1034.2	1034.2	1041.5	1155.0	1191.2	1152.3	1035.2	975.3	946.3	975.3	1035.2
162.5°	1037.0	1053.2	1093.3	1186.8	1216.7	1184.1	1086.0	1010.5	986.1	1010.5	1086.0
165°	1076.9	1091.4	1151.4	1214.9	1235.8	1212.2	1148.6	1070.5	1041.5	1070.5	1148.6
167.5°	1118.7	1150.4	1198.6	1246.7	1254.0	1238.5	1196.8	1142.2	1116.0	1142.2	1196.8
170°	1185.8	1213.9	1238.5	1258.5	1268.5	1259.4	1226.7	1199.4	1182.1	1199.4	1226.7
172.5°	1239.4	1257.5	1267.6	1280.3	1273.9	1270.3	1254.0	1240.3	1231.2	1240.3	1254.0
175°	1272.9	1276.6	1285.7	1281.2	1286.7	1276.7	1277.6	1282.9	1245.7	1282.9	1277.6
177.5°	1284.7	1291.1	1287.6	1279.4	1280.3	1278.5	1282.1	1284.7	1279.3	1284.7	1282.1
180°	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7



TEST NUMBER: P392579

CATALOG NUMBER: MWL-3-30-25-UNV-L840-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3
2.5°	1099.2	1101.1	1100.1	1098.2	1100.3	1096.5
5°	1093.2	1094.2	1093.2	1093.2	1094.3	1090.5
7.5°	1083.3	1085.2	1084.2	1082.3	1084.3	1081.4
10°	1069.3	1070.3	1070.3	1069.3	1070.3	1070.3
12.5°	1053.3	1052.4	1053.3	1051.3	1052.3	1054.2
15°	1032.4	1032.4	1033.3	1031.3	1033.3	1035.1
17.5°	1010.4	1010.4	1010.4	1008.3	1009.3	1011.1
20°	984.6	984.6	985.4	982.4	984.3	983.2
22.5°	955.6	956.6	956.5	954.4	954.3	952.3
25°	926.6	924.6	927.5	923.4	919.3	920.3
27.5°	894.5	894.6	895.4	890.4	886.3	880.3
30°	858.5	857.6	860.4	854.3	844.3	841.3
32.5°	821.5	821.5	823.4	813.3	802.3	796.3
35°	780.6	784.6	783.4	769.4	755.4	753.4
37.5°	738.6	741.5	741.4	724.4	708.4	706.4
40°	694.6	701.5	696.4	674.4	661.4	660.4
42.5°	646.6	656.5	648.4	622.4	613.4	620.4
45°	595.6	608.5	597.4	573.4	568.4	576.4
47.5°	541.6	558.5	542.5	525.4	526.4	536.4
50°	487.7	496.6	489.5	477.4	486.4	498.4
52.5°	435.7	429.6	437.5	434.5	448.4	460.4
55°	382.8	365.7	384.6	394.5	411.5	421.5
57.5°	331.8	310.7	333.6	355.5	376.5	384.5
60°	280.8	262.7	281.7	313.6	341.6	345.6
62.5°	235.8	223.8	236.7	273.6	303.6	310.6
65°	198.8	193.8	199.7	232.7	266.7	271.7
67.5°	163.8	163.8	163.8	198.7	226.7	236.7
70°	136.8	137.8	136.8	163.8	189.8	199.8
72.5°	110.9	114.9	111.8	133.8	155.8	170.8
75°	90.9	95.9	90.9	105.9	126.8	144.8
77.5°	70.9	76.9	70.9	82.9	105.4	130.1
80°	53.9	58.9	53.9	67.6	100.2	128.5
82.5°	38.9	40.9	38.9	66.5	107.1	131.3
85°	29.8	23.9	31.6	77.5	123.4	146.5
87.5°	26.5	7.0	39.3	96.8	149.0	166.1
90°	16.8	0.9	51.3	123.5	176.5	189.5
92.5°	10.8	15.5	73.5	151.1	207.6	220.5
95°	5.6	37.3	96.4	184.2	243.5	250.9
97.5°	11.9	65.5	128.1	217.1	277.3	283.9
100°	31.0	100.0	167.2	252.0	309.4	312.3
102.5°	57.3	137.2	204.4	285.2	344.1	358.0
105°	92.7	179.9	243.4	329.7	378.9	394.6
107.5°	133.6	225.3	283.4	369.6	420.6	429.6
110°	177.1	272.5	323.3	408.7	464.1	475.0



TEST NUMBER: P392579

CATALOG NUMBER: MWL-3-30-25-UNV-L840-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	224.4	321.5	365.1	445.0	510.5	518.6
115°	277.9	366.9	404.1	486.8	547.7	552.2
117.5°	326.0	421.4	444.1	517.6	586.7	587.6
120°	376.9	473.1	484.0	560.3	624.9	632.1
122.5°	428.6	522.2	522.2	596.6	658.5	663.0
125°	476.8	574.8	560.3	623.9	689.3	691.1
127.5°	525.8	628.4	602.1	659.3	719.3	716.6
130°	579.4	679.2	640.2	692.9	747.4	738.4
132.5°	628.4	733.7	679.2	728.4	775.6	781.0
135°	677.4	784.6	712.8	758.3	804.6	802.8
137.5°	724.6	831.8	753.7	780.9	823.7	829.1
140°	771.9	882.6	791.0	812.8	847.3	848.2
142.5°	820.0	933.5	830.0	843.7	873.6	868.2
145°	875.5	981.6	880.9	874.5	893.6	881.8
147.5°	923.6	1023.3	916.3	897.2	919.9	904.5
150°	977.1	1065.9	965.3	929.0	942.6	935.4
152.5°	1025.1	1099.5	1017.8	952.5	969.0	959.9
155°	1073.2	1134.9	1069.6	978.1	988.8	985.3
157.5°	1115.0	1165.8	1108.6	1003.4	1016.1	1008.8
160°	1152.3	1191.2	1155.0	1041.5	1034.2	1034.2
162.5°	1184.1	1216.7	1186.8	1093.3	1053.2	1037.0
165°	1212.2	1235.8	1214.9	1151.4	1091.4	1076.9
167.5°	1238.5	1254.0	1246.7	1198.6	1150.4	1118.7
170°	1259.4	1268.5	1258.5	1238.5	1213.9	1185.8
172.5°	1270.3	1273.9	1280.3	1267.6	1257.5	1239.4
175°	1276.7	1286.7	1281.2	1285.7	1276.6	1272.9
177.5°	1278.5	1280.3	1279.4	1287.6	1291.1	1284.7
180°	1285.7	1285.7	1285.7	1285.7	1285.7	1285.7

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