

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: P392651

Luminaire Tested: **MWL-4-26-60-UNV-L940-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392651
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-26-60-UNV-L940-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

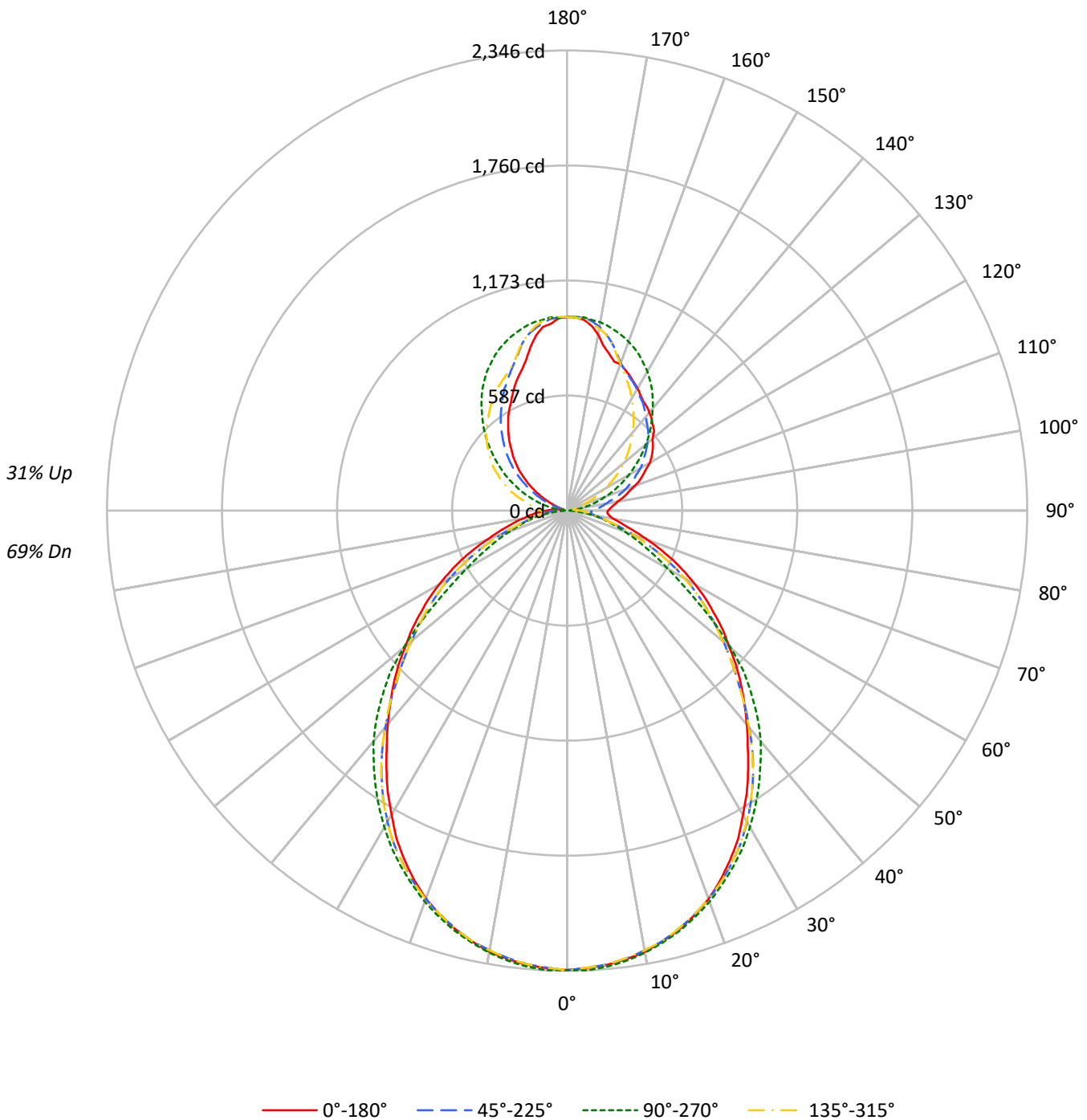
Lumens per Lamp: N/A
Luminaire Lumens: 7835.4 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Semi-Direct

Input Watts (W): 88.779
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	102	98	94	91	97	93	89	86	83	80	78	74	72	70	66	64	63	59
2	94	86	80	75	88	82	76	72	73	69	65	66	62	59	59	56	54	50
3	86	76	69	63	81	72	66	60	65	60	56	59	54	51	52	49	46	43
4	79	68	60	54	74	65	57	52	58	52	48	52	48	44	47	43	40	37
5	73	61	53	47	68	58	50	45	52	46	42	47	42	39	43	39	35	33
6	67	55	47	41	63	52	45	39	48	41	37	43	38	34	39	35	31	29
7	62	50	42	36	59	48	40	35	43	37	33	39	34	30	36	31	28	26
8	58	45	38	32	55	43	36	31	40	34	29	36	31	27	33	29	25	23
9	54	42	34	29	51	40	33	28	37	31	26	33	28	25	30	26	23	21
10	51	38	31	26	48	37	30	25	34	28	24	31	26	22	28	24	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15130	15130	15130	15130
5°	14938	13916	14938	13916
10°	14707	12761	14707	12761
15°	14377	11693	14363	11693
20°	13954	10692	13940	10692
25°	13356	9733	13342	9733
30°	12607	8809	12588	8809
35°	11819	7905	11804	7905
40°	11050	7041	11029	7041
45°	10367	6082	10350	6082
50°	9622	4987	9604	4987
55°	8965	3757	8951	3757
60°	8246	2788	8237	2788
65°	7412	2115	7412	2115
70°	6373	1563	6385	1563
75°	5590	1137	5628	1137
80°	5571	735	5263	735
85°	7076	330	5548	330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.9	2.8
10°-20°	622.9	7.9
20°-30°	913.3	11.7
30°-40°	1033.8	13.2
40°-50°	973.9	12.4
50°-60°	778.7	9.9
60°-70°	511.3	6.5
70°-80°	261.0	3.3
80°-90°	127.4	1.6
90°-100°	106.2	1.4
100°-110°	157.4	2.0
110°-120°	263.4	3.4
120°-130°	357.4	4.6
130°-140°	407.3	5.2
140°-150°	406.1	5.2
150°-160°	353.4	4.5
160°-170°	248.5	3.2
170°-180°	92.5	1.2
0°-30°	1757.0	22.4
0°-40°	2790.9	35.6
0°-60°	4543.4	58.0
0°-90°	5443.1	69.5
90°-120°	527.0	6.7
90°-150°	1697.9	21.7
90°-180°	2392.0	30.5
0°-180°	7835.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2343	2343	2343	2343	2343	
5°	2325	2334	2325	2334	2325	221
15°	2210	2217	2208	2217	2210	622
25°	1965	2003	1963	2003	1965	903
35°	1608	1705	1606	1705	1608	1006
45°	1253	1332	1251	1332	1253	966
55°	915	810	913	810	915	820
65°	593	435	593	435	593	586
75°	311	216	313	216	311	341
85°	209	55	164	55	209	177
90°	209	2	104	2	209	115
95°	229	29	64	29	229	194
105°	310	139	17	139	310	328
115°	425	282	100	282	425	422
125°	532	442	243	442	532	475
135°	617	603	389	603	617	476
145°	679	754	524	754	679	428
155°	757	873	657	873	757	349
165°	827	949	800	949	827	235
175°	976	989	956	989	976	91
180°	987	987	987	987	987	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7
2.5°	2334.3	2340.3	2332.5	2345.1	2346.0	2344.4	2332.5	2340.3	2335.0	2340.3	2332.5
5°	2325.2	2330.2	2322.5	2333.4	2334.3	2333.4	2321.8	2330.2	2325.2	2330.2	2321.8
7.5°	2306.7	2311.7	2302.6	2316.1	2315.2	2315.4	2302.0	2311.1	2306.7	2311.1	2302.0
10°	2283.8	2282.6	2277.1	2289.0	2289.0	2288.3	2276.5	2281.2	2283.8	2281.2	2276.5
12.5°	2249.6	2250.7	2247.3	2256.4	2254.8	2256.4	2247.3	2249.3	2248.2	2249.3	2247.3
15°	2210.2	2207.9	2205.4	2218.2	2217.4	2217.4	2204.7	2206.5	2208.1	2206.5	2204.7
17.5°	2161.9	2162.3	2158.9	2171.0	2171.9	2171.0	2158.2	2161.7	2159.9	2161.7	2158.2
20°	2107.3	2107.5	2107.9	2120.9	2122.0	2120.2	2107.2	2106.1	2105.2	2106.1	2107.2
22.5°	2040.0	2047.3	2049.6	2065.3	2063.7	2064.6	2048.9	2046.0	2038.7	2046.0	2048.9
25°	1965.3	1971.7	1984.6	2003.3	2002.7	2002.7	1983.3	1969.6	1963.2	1969.6	1983.3
27.5°	1887.0	1896.1	1915.4	1938.5	1938.0	1937.7	1914.0	1894.0	1884.9	1894.0	1914.0
30°	1792.2	1804.1	1833.2	1863.5	1863.3	1862.1	1831.1	1802.0	1789.5	1802.0	1831.1
32.5°	1704.8	1713.9	1747.6	1786.9	1786.5	1785.6	1745.5	1711.1	1702.0	1711.1	1745.5
35°	1608.4	1617.5	1652.1	1701.3	1704.8	1699.3	1650.1	1615.5	1606.4	1615.5	1650.1
37.5°	1512.7	1518.2	1552.8	1611.1	1619.8	1609.1	1550.8	1516.2	1510.7	1516.2	1550.8
40°	1425.2	1419.8	1443.5	1511.2	1535.9	1509.8	1440.7	1417.0	1422.5	1417.0	1440.7
42.5°	1337.8	1326.8	1338.0	1406.4	1437.5	1405.0	1335.9	1324.1	1335.0	1324.1	1335.9
45°	1253.3	1229.6	1230.5	1295.2	1331.8	1293.9	1227.7	1227.5	1251.2	1227.5	1227.7
47.5°	1167.7	1144.9	1135.8	1184.2	1224.3	1183.6	1133.0	1142.8	1165.6	1142.8	1133.0
50°	1076.6	1062.0	1038.3	1071.3	1087.9	1069.9	1035.5	1059.2	1074.5	1059.2	1035.5
52.5°	1000.9	982.7	948.3	961.0	953.1	959.7	946.2	979.9	998.8	979.9	946.2
55°	914.6	904.5	865.4	846.5	810.2	845.0	863.3	902.4	913.2	902.4	863.3
57.5°	838.0	829.8	779.7	737.2	690.0	735.7	777.6	827.7	836.7	827.7	777.6
60°	753.6	753.6	693.4	625.3	589.8	624.6	692.0	752.1	752.8	752.1	692.0
62.5°	672.5	669.7	606.0	525.1	509.8	524.3	604.5	668.3	671.8	668.3	604.5
65°	593.4	580.6	518.7	439.4	435.1	438.7	518.0	579.9	593.4	579.9	518.0
67.5°	511.4	495.9	434.9	364.9	373.1	364.9	434.1	495.2	511.4	495.2	434.1
70°	434.1	412.3	362.2	301.1	310.2	301.1	362.2	413.0	434.9	413.0	362.2
72.5°	370.4	334.8	291.1	246.5	260.4	245.8	291.1	335.6	371.8	335.6	291.1
75°	311.1	271.1	225.8	197.5	215.7	197.5	226.4	271.8	313.2	271.8	226.4
77.5°	273.0	224.7	176.6	152.9	172.9	152.9	177.2	222.6	270.2	222.6	177.2
80°	238.3	194.3	142.2	113.7	131.9	113.7	140.8	183.2	225.1	183.2	140.8
82.5°	220.4	179.6	124.1	81.8	90.9	81.8	115.8	154.5	194.0	154.5	115.8
85°	209.2	175.8	121.2	64.8	55.4	63.3	101.0	133.4	164.0	133.4	101.0
87.5°	205.1	181.5	123.2	62.4	18.2	52.7	83.5	114.7	133.5	114.7	83.5
90°	208.6	190.6	134.5	62.4	1.6	36.0	65.7	92.6	104.1	92.6	65.7
92.5°	218.2	205.3	148.4	68.5	12.0	20.5	53.1	76.6	81.8	76.6	53.1
95°	229.0	224.8	164.6	78.7	28.7	9.2	39.5	63.3	64.1	63.3	39.5
97.5°	245.0	241.4	181.6	99.2	50.3	10.2	27.9	50.2	50.2	50.2	27.9
100°	259.3	256.8	200.2	129.1	77.6	24.8	15.8	38.4	40.2	38.4	15.8
102.5°	286.3	275.2	221.4	157.6	106.1	44.9	14.1	24.7	27.4	24.7	14.1
105°	309.6	296.2	254.6	187.6	138.9	72.1	29.9	16.6	16.7	16.6	29.9
107.5°	333.1	324.4	285.2	218.2	173.7	103.4	53.5	29.4	21.5	29.4	53.5
110°	366.1	357.8	315.1	248.8	209.8	136.8	80.6	51.7	40.5	51.7	80.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	399.5	393.2	342.9	280.8	247.4	172.9	114.1	79.4	69.1	79.4	114.1
115°	425.2	420.8	374.9	310.7	282.2	214.0	150.9	111.2	99.7	111.2	150.9
117.5°	452.4	450.8	398.6	342.2	324.8	251.8	185.0	144.0	131.7	144.0	185.0
120°	486.4	480.9	431.3	372.8	364.5	290.7	222.6	182.4	169.2	182.4	222.6
122.5°	510.1	506.7	459.1	402.1	402.1	330.4	258.8	218.6	204.7	218.6	258.8
125°	531.7	530.3	480.9	431.3	442.4	367.3	300.0	258.3	243.0	258.3	300.0
127.5°	551.1	553.2	508.0	463.3	483.4	404.9	339.7	293.7	277.8	293.7	339.7
130°	567.9	574.8	533.8	492.5	522.4	445.9	375.2	329.3	318.8	329.3	375.2
132.5°	600.6	596.4	560.2	523.3	564.2	484.3	412.7	364.7	352.9	364.7	412.7
135°	617.3	618.6	583.2	549.1	603.1	522.0	448.2	400.9	389.0	400.9	448.2
137.5°	637.4	633.2	601.2	580.4	639.3	558.1	483.0	439.2	420.4	439.2	483.0
140°	652.1	651.3	624.9	608.3	678.2	593.6	518.5	474.0	456.6	474.0	518.5
142.5°	667.4	672.4	648.5	638.9	717.2	631.2	556.8	508.9	491.4	508.9	556.8
145°	678.7	687.7	672.2	677.1	754.1	672.9	590.1	541.6	523.5	541.6	590.1
147.5°	696.1	707.9	689.6	704.2	786.1	709.7	623.6	575.7	559.7	575.7	623.6
150°	718.9	724.4	713.9	741.8	818.8	750.8	657.6	607.5	591.5	607.5	657.6
152.5°	737.6	744.6	732.7	782.8	844.5	788.4	695.2	639.5	620.7	639.5	695.2
155°	757.1	759.9	751.6	822.4	872.6	825.3	725.1	675.0	656.9	675.0	725.1
157.5°	775.2	780.7	771.0	852.4	896.2	857.3	759.2	710.5	694.4	710.5	759.2
160°	794.7	794.7	800.2	887.2	915.7	885.1	795.4	749.5	727.1	749.5	795.4
162.5°	796.8	810.0	839.9	911.6	934.5	909.5	834.3	777.3	757.8	777.3	834.3
165°	827.4	839.2	884.4	933.1	949.1	931.1	882.3	823.2	800.2	823.2	882.3
167.5°	859.3	884.4	920.6	958.4	963.9	952.1	919.2	878.1	857.3	878.1	919.2
170°	910.6	933.1	951.2	966.5	975.1	967.2	942.2	921.9	907.8	921.9	942.2
172.5°	950.7	966.5	973.4	984.1	979.3	976.4	963.0	953.3	944.5	953.3	963.0
175°	976.5	981.1	987.4	984.8	989.0	981.3	981.1	986.0	955.7	986.0	981.1
177.5°	985.5	992.3	988.7	983.4	984.1	982.7	984.6	987.4	981.3	987.4	984.6
180°	987.4	987.4	987.4	987.4	987.4	987.4	987.4	987.4	987.4	987.4	987.4



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CATALOG NUMBER: MWL-4-26-60-UNV-L940-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7
2.5°	2344.4	2346.0	2345.1	2332.5	2340.3	2334.3
5°	2333.4	2334.3	2333.4	2322.5	2330.2	2325.2
7.5°	2315.4	2315.2	2316.1	2302.6	2311.7	2306.7
10°	2288.3	2289.0	2289.0	2277.1	2282.6	2283.8
12.5°	2256.4	2254.8	2256.4	2247.3	2250.7	2249.6
15°	2217.4	2217.4	2218.2	2205.4	2207.9	2210.2
17.5°	2171.0	2171.9	2171.0	2158.9	2162.3	2161.9
20°	2120.2	2122.0	2120.9	2107.9	2107.5	2107.3
22.5°	2064.6	2063.7	2065.3	2049.6	2047.3	2040.0
25°	2002.7	2002.7	2003.3	1984.6	1971.7	1965.3
27.5°	1937.7	1938.0	1938.5	1915.4	1896.1	1887.0
30°	1862.1	1863.3	1863.5	1833.2	1804.1	1792.2
32.5°	1785.6	1786.5	1786.9	1747.6	1713.9	1704.8
35°	1699.3	1704.8	1701.3	1652.1	1617.5	1608.4
37.5°	1609.1	1619.8	1611.1	1552.8	1518.2	1512.7
40°	1509.8	1535.9	1511.2	1443.5	1419.8	1425.2
42.5°	1405.0	1437.5	1406.4	1338.0	1326.8	1337.8
45°	1293.9	1331.8	1295.2	1230.5	1229.6	1253.3
47.5°	1183.6	1224.3	1184.2	1135.8	1144.9	1167.7
50°	1069.9	1087.9	1071.3	1038.3	1062.0	1076.6
52.5°	959.7	953.1	961.0	948.3	982.7	1000.9
55°	845.0	810.2	846.5	865.4	904.5	914.6
57.5°	735.7	690.0	737.2	779.7	829.8	838.0
60°	624.6	589.8	625.3	693.4	753.6	753.6
62.5°	524.3	509.8	525.1	606.0	669.7	672.5
65°	438.7	435.1	439.4	518.7	580.6	593.4
67.5°	364.9	373.1	364.9	434.9	495.9	511.4
70°	301.1	310.2	301.1	362.2	412.3	434.1
72.5°	245.8	260.4	246.5	291.1	334.8	370.4
75°	197.5	215.7	197.5	225.8	271.1	311.1
77.5°	152.9	172.9	152.9	176.6	224.7	273.0
80°	113.7	131.9	113.7	142.2	194.3	238.3
82.5°	81.8	90.9	81.8	124.1	179.6	220.4
85°	63.3	55.4	64.8	121.2	175.8	209.2
87.5°	52.7	18.2	62.4	123.2	181.5	205.1
90°	36.0	1.6	62.4	134.5	190.6	208.6
92.5°	20.5	12.0	68.5	148.4	205.3	218.2
95°	9.2	28.7	78.7	164.6	224.8	229.0
97.5°	10.2	50.3	99.2	181.6	241.4	245.0
100°	24.8	77.6	129.1	200.2	256.8	259.3
102.5°	44.9	106.1	157.6	221.4	275.2	286.3
105°	72.1	138.9	187.6	254.6	296.2	309.6
107.5°	103.4	173.7	218.2	285.2	324.4	333.1
110°	136.8	209.8	248.8	315.1	357.8	366.1



TEST NUMBER: P392651

CATALOG NUMBER: MWL-4-26-60-UNV-L940-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	172.9	247.4	280.8	342.9	393.2	399.5
115°	214.0	282.2	310.7	374.9	420.8	425.2
117.5°	251.8	324.8	342.2	398.6	450.8	452.4
120°	290.7	364.5	372.8	431.3	480.9	486.4
122.5°	330.4	402.1	402.1	459.1	506.7	510.1
125°	367.3	442.4	431.3	480.9	530.3	531.7
127.5°	404.9	483.4	463.3	508.0	553.2	551.1
130°	445.9	522.4	492.5	533.8	574.8	567.9
132.5°	484.3	564.2	523.3	560.2	596.4	600.6
135°	522.0	603.1	549.1	583.2	618.6	617.3
137.5°	558.1	639.3	580.4	601.2	633.2	637.4
140°	593.6	678.2	608.3	624.9	651.3	652.1
142.5°	631.2	717.2	638.9	648.5	672.4	667.4
145°	672.9	754.1	677.1	672.2	687.7	678.7
147.5°	709.7	786.1	704.2	689.6	707.9	696.1
150°	750.8	818.8	741.8	713.9	724.4	718.9
152.5°	788.4	844.5	782.8	732.7	744.6	737.6
155°	825.3	872.6	822.4	751.6	759.9	757.1
157.5°	857.3	896.2	852.4	771.0	780.7	775.2
160°	885.1	915.7	887.2	800.2	794.7	794.7
162.5°	909.5	934.5	911.6	839.9	810.0	796.8
165°	931.1	949.1	933.1	884.4	839.2	827.4
167.5°	952.1	963.9	958.4	920.6	884.4	859.3
170°	967.2	975.1	966.5	951.2	933.1	910.6
172.5°	976.4	979.3	984.1	973.4	966.5	950.7
175°	981.3	989.0	984.8	987.4	981.1	976.5
177.5°	982.7	984.1	983.4	988.7	992.3	985.5
180°	987.4	987.4	987.4	987.4	987.4	987.4

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