

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: P392575

Luminaire Tested: **MWL-3-27-57-UNV-L935-EDD**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P392575
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-3-27-57-UNV-L935-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

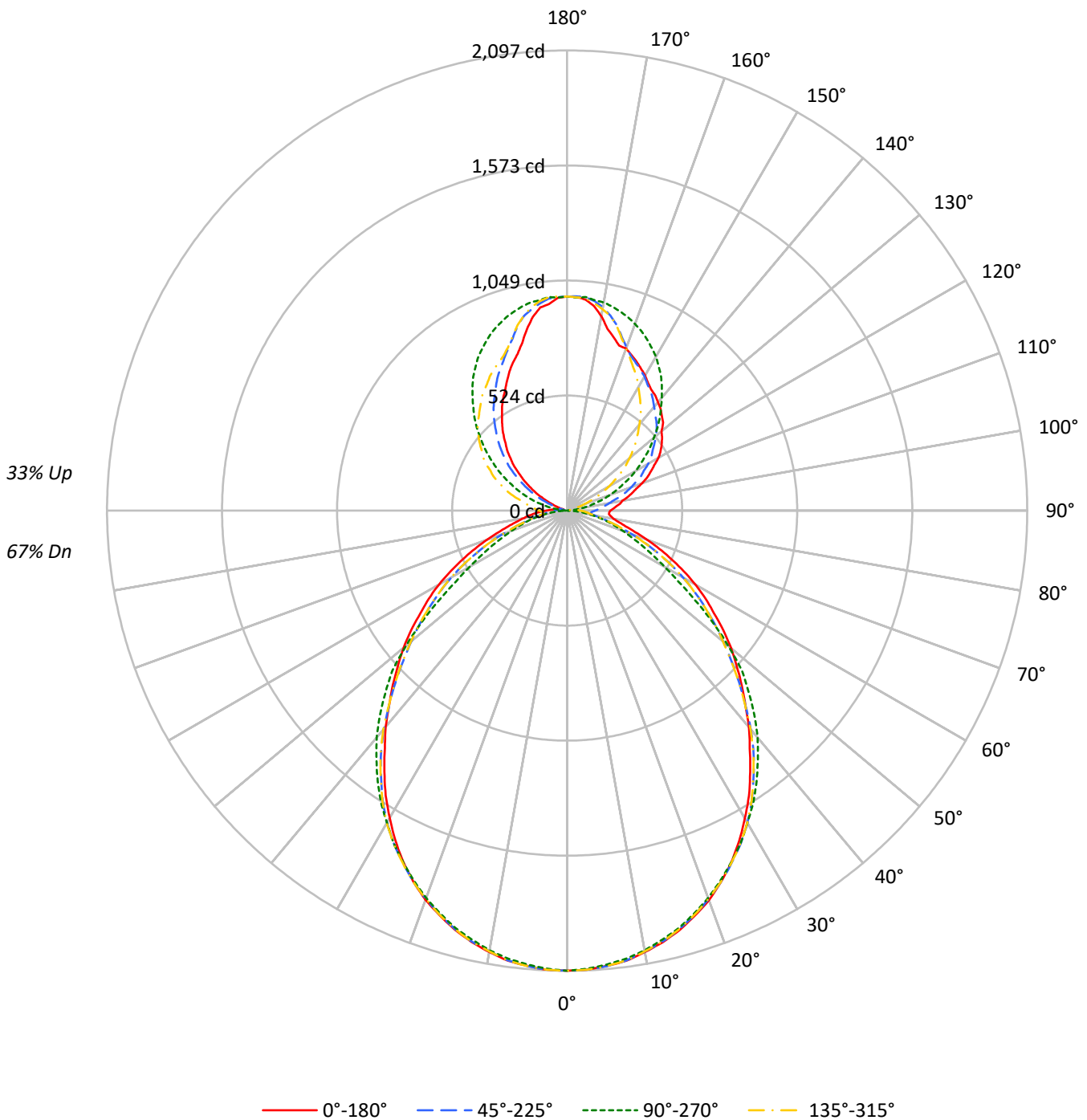
Lumens per Lamp: N/A
Luminaire Lumens: 7200.9 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: Semi-Direct

Input Watts (W): 94.94
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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	90	96	92	89	86	82	79	77	73	71	69	64	63	61	57
2	93	86	80	74	88	81	76	71	72	68	65	64	61	58	57	55	52	49
3	85	76	69	63	80	72	65	60	64	59	55	57	53	50	51	48	45	42
4	78	68	60	54	74	64	57	51	58	52	47	51	47	43	46	42	39	36
5	72	61	52	46	68	57	50	45	52	46	41	46	42	38	41	38	35	32
6	67	55	46	41	63	52	44	39	47	41	36	42	37	33	38	34	31	28
7	62	49	41	36	58	47	40	35	43	37	32	39	34	30	35	31	27	25
8	58	45	37	32	54	43	36	31	39	33	29	35	30	27	32	28	25	23
9	54	41	34	29	51	40	33	28	36	30	26	33	28	24	30	25	22	20
10	50	38	31	26	48	36	30	25	33	28	24	30	25	22	27	23	20	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	18057	18057	18057	18057
5°	17788	16504	17788	16504
10°	17435	15127	17435	15127
15°	17014	13845	16997	13845
20°	16484	12621	16465	12621
25°	15789	11458	15771	11458
30°	14913	10356	14887	10356
35°	13931	9308	13911	9308
40°	12974	8252	12946	8252
45°	12032	7127	12010	7127
50°	11209	5863	11184	5863
55°	10243	4401	10224	4401
60°	9374	3231	9364	3231
65°	8220	2433	8220	2433
70°	7056	1821	7069	1821
75°	6013	1311	6061	1311
80°	5947	837	5587	837
85°	7297	343	5594	343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.4	2.7
10°-20°	555.9	7.7
20°-30°	814.7	11.3
30°-40°	923.9	12.8
40°-50°	868.6	12.1
50°-60°	689.4	9.6
60°-70°	448.3	6.2
70°-80°	228.6	3.2
80°-90°	113.9	1.6
90°-100°	102.1	1.4
100°-110°	154.9	2.2
110°-120°	260.5	3.6
120°-130°	353.1	4.9
130°-140°	402.5	5.6
140°-150°	401.2	5.6
150°-160°	349.1	4.8
160°-170°	245.5	3.4
170°-180°	91.4	1.3
0°-30°	1568.0	21.8
0°-40°	2491.9	34.6
0°-60°	4049.9	56.2
0°-90°	4840.6	67.2
90°-120°	517.4	7.2
90°-150°	1674.3	23.3
90°-180°	2360.0	32.8
0°-180°	7200.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2097	2097	2097	2097	2097	
5°	2083	2076	2083	2076	2083	198
15°	1980	1969	1978	1969	1980	557
25°	1769	1768	1767	1768	1769	813
35°	1454	1505	1452	1505	1454	909
45°	1125	1170	1123	1170	1125	869
55°	818	712	816	712	818	735
65°	524	375	524	375	524	521
75°	274	186	277	186	274	301
85°	191	43	146	43	191	162
90°	198	2	95	2	198	109
95°	225	28	62	28	225	191
105°	305	137	16	137	305	324
115°	421	279	99	279	421	418
125°	526	437	241	437	526	470
135°	610	596	385	596	610	471
145°	670	746	517	746	670	422
155°	748	862	650	862	748	345
165°	818	938	791	938	818	232
175°	965	976	945	976	965	90
180°	975	975	975	975	975	



TEST NUMBER: P392575

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9
2.5°	2093.9	2094.5	2094.2	2091.5	2089.8	2090.8	2094.2	2094.5	2094.7	2094.5	2094.2
5°	2082.9	2085.2	2084.0	2079.8	2076.4	2079.8	2083.3	2085.2	2082.9	2085.2	2083.3
7.5°	2069.2	2068.0	2068.0	2062.0	2059.4	2061.3	2067.4	2067.4	2069.2	2067.4	2067.4
10°	2042.8	2043.4	2040.1	2037.6	2035.0	2036.9	2039.4	2042.1	2042.8	2042.1	2039.4
12.5°	2014.4	2013.0	2011.4	2007.2	2002.3	2007.2	2011.4	2011.6	2013.1	2011.6	2011.4
15°	1979.5	1974.0	1974.9	1972.4	1969.1	1971.7	1974.2	1972.6	1977.5	1972.6	1974.2
17.5°	1935.4	1933.2	1931.7	1930.1	1925.0	1930.1	1931.0	1932.6	1933.4	1932.6	1931.0
20°	1889.7	1886.4	1883.4	1883.5	1878.5	1882.8	1882.7	1885.1	1887.6	1885.1	1882.7
22.5°	1832.1	1832.1	1831.6	1830.1	1825.1	1829.3	1831.0	1830.8	1830.8	1830.8	1831.0
25°	1769.4	1770.2	1772.9	1774.1	1768.3	1773.3	1771.6	1768.2	1767.4	1768.2	1771.6
27.5°	1697.3	1703.3	1711.9	1713.7	1710.6	1713.1	1710.5	1701.2	1695.3	1701.2	1710.5
30°	1620.1	1625.2	1643.9	1652.5	1642.8	1651.2	1641.8	1623.2	1617.3	1623.2	1641.8
32.5°	1542.1	1543.8	1566.7	1579.6	1578.2	1578.2	1564.7	1541.1	1539.3	1541.1	1564.7
35°	1454.1	1455.8	1481.3	1505.0	1505.4	1502.8	1479.1	1453.6	1452.0	1453.6	1479.1
37.5°	1366.7	1368.5	1395.6	1421.9	1427.3	1419.7	1393.5	1366.3	1364.6	1366.3	1393.5
40°	1288.7	1279.4	1302.3	1333.9	1350.1	1332.4	1299.5	1276.6	1285.9	1276.6	1299.5
42.5°	1202.2	1190.4	1201.6	1242.2	1261.9	1240.9	1199.4	1187.5	1199.4	1187.5	1199.4
45°	1125.2	1104.9	1108.3	1144.7	1170.4	1143.3	1105.5	1102.8	1123.2	1102.8	1105.5
47.5°	1047.2	1026.0	1015.8	1048.3	1080.4	1047.5	1013.0	1023.9	1045.1	1023.9	1013.0
50°	975.2	949.7	929.3	943.1	959.3	941.6	926.6	946.9	973.0	946.9	926.6
52.5°	897.9	876.8	846.4	848.1	836.3	846.7	844.3	873.9	895.9	873.9	844.3
55°	817.6	804.8	765.8	745.5	711.8	744.3	763.8	802.8	816.1	802.8	763.8
57.5°	748.9	734.5	687.8	643.8	600.8	642.4	685.7	732.3	747.4	732.3	685.7
60°	675.2	663.3	610.8	543.1	512.6	542.4	609.4	661.9	674.5	661.9	609.4
62.5°	598.9	590.4	532.8	455.7	439.0	455.0	531.4	589.0	598.2	589.0	531.4
65°	523.6	512.6	452.3	381.9	375.4	381.2	451.6	511.9	523.6	511.9	451.6
67.5°	454.8	437.9	381.9	318.5	317.6	318.5	381.2	437.2	454.8	437.2	381.2
70°	387.2	363.5	312.5	265.1	271.0	265.1	312.5	364.1	387.9	364.1	312.5
72.5°	325.3	297.4	252.4	215.9	223.7	215.2	252.4	298.0	326.7	298.0	252.4
75°	274.4	236.3	199.2	172.8	186.4	172.8	199.8	237.0	276.6	237.0	199.8
77.5°	239.2	196.7	154.2	133.0	149.1	133.0	154.9	194.5	236.5	194.5	154.9
80°	214.4	171.5	124.0	100.8	112.6	100.8	122.6	160.4	201.4	160.4	122.6
82.5°	201.2	159.5	109.4	72.7	77.8	72.7	101.0	134.8	175.1	134.8	101.0
85°	191.1	160.5	108.4	56.2	43.1	54.8	88.4	118.6	146.5	118.6	88.4
87.5°	192.2	169.0	114.8	54.6	12.7	45.0	75.6	103.0	121.4	103.0	75.6
90°	197.8	181.6	127.6	57.1	1.6	31.1	59.5	84.7	94.7	84.7	59.5
92.5°	211.1	198.6	142.8	65.8	11.9	18.3	48.7	71.4	76.4	71.4	48.7
95°	225.1	217.6	160.5	75.8	28.3	7.0	36.8	58.2	62.2	58.2	36.8
97.5°	243.4	236.7	175.4	97.9	49.6	9.9	23.6	47.6	51.1	47.6	23.6
100°	255.0	248.3	195.4	127.5	76.5	24.3	13.3	32.6	38.6	32.6	13.3
102.5°	281.5	269.0	217.6	155.6	104.8	44.3	12.9	21.7	25.9	21.7	12.9
105°	305.1	291.3	251.3	185.2	137.0	71.1	29.3	15.0	15.9	15.0	29.3
107.5°	329.6	321.1	281.6	215.4	171.5	102.0	52.7	29.7	21.7	29.7	52.7
110°	363.1	353.2	311.1	245.7	207.2	135.0	79.6	50.8	41.5	50.8	79.6



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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°	395.3	388.2	338.6	277.2	244.2	170.7	112.5	78.3	68.9	78.3	112.5
115°	420.7	416.3	371.0	307.6	278.6	212.2	149.8	110.6	99.1	110.6	149.8
117.5°	447.5	445.9	394.4	337.8	320.7	248.5	183.5	142.9	130.6	142.9	183.5
120°	481.2	474.8	426.7	368.1	359.9	287.1	220.6	180.0	167.8	180.0	220.6
122.5°	504.5	500.2	454.2	396.9	396.9	326.3	256.3	215.7	202.9	215.7	256.3
125°	525.8	523.6	474.8	425.8	436.8	362.6	296.1	254.9	240.7	254.9	296.1
127.5°	545.0	547.2	501.6	457.4	477.4	399.8	335.3	290.8	275.0	290.8	335.3
130°	561.6	568.4	527.1	487.2	515.8	441.1	370.4	325.8	315.6	325.8	370.4
132.5°	593.8	589.7	553.1	516.7	558.0	478.2	407.5	361.0	349.2	361.0	407.5
135°	610.3	611.7	575.8	542.2	596.4	515.3	442.5	396.6	384.9	396.6	442.5
137.5°	630.3	626.2	593.7	573.1	632.2	551.0	476.8	434.5	415.8	434.5	476.8
140°	644.7	644.0	617.1	600.6	670.6	586.2	512.0	468.8	451.6	468.8	512.0
142.5°	659.9	663.9	641.3	630.8	709.1	623.2	550.5	502.5	485.9	502.5	550.5
145°	670.1	679.1	664.6	668.6	745.5	664.4	583.5	534.7	516.9	534.7	583.5
147.5°	687.3	699.0	681.0	695.4	777.1	700.8	615.7	568.4	552.6	568.4	615.7
150°	710.6	716.1	705.1	733.4	809.4	742.3	649.3	600.8	584.9	600.8	649.3
152.5°	729.2	736.1	723.5	773.1	834.9	778.6	686.4	632.2	613.8	632.2	686.4
155°	748.5	751.2	742.1	812.2	861.7	814.9	715.9	667.4	649.5	667.4	715.9
157.5°	766.3	771.8	761.3	841.8	885.1	846.6	749.7	702.4	686.6	702.4	749.7
160°	785.6	784.7	790.2	876.1	904.3	874.0	785.4	740.0	719.0	740.0	785.4
162.5°	787.7	799.8	829.3	901.0	923.6	899.0	823.8	767.5	749.2	767.5	823.8
165°	817.9	828.6	874.2	922.3	938.1	920.3	872.2	812.9	791.0	812.9	872.2
167.5°	848.6	873.3	909.9	946.4	951.9	940.2	908.5	867.2	846.6	867.2	908.5
170°	899.3	921.5	940.2	955.3	962.8	956.0	931.2	910.4	896.6	910.4	931.2
172.5°	939.9	954.5	962.1	971.8	967.0	964.2	951.9	941.4	933.7	941.4	951.9
175°	965.3	968.9	975.9	972.5	976.5	969.0	969.7	973.7	944.7	973.7	969.7
177.5°	974.2	979.9	977.2	971.0	971.8	970.4	973.2	975.1	970.2	975.1	973.2
180°	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1



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CATALOG NUMBER: MWL-3-27-57-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2096.9	2096.9	2096.9	2096.9	2096.9	2096.9
2.5°	2090.8	2089.8	2091.5	2094.2	2094.5	2093.9
5°	2079.8	2076.4	2079.8	2084.0	2085.2	2082.9
7.5°	2061.3	2059.4	2062.0	2068.0	2068.0	2069.2
10°	2036.9	2035.0	2037.6	2040.1	2043.4	2042.8
12.5°	2007.2	2002.3	2007.2	2011.4	2013.0	2014.4
15°	1971.7	1969.1	1972.4	1974.9	1974.0	1979.5
17.5°	1930.1	1925.0	1930.1	1931.7	1933.2	1935.4
20°	1882.8	1878.5	1883.5	1883.4	1886.4	1889.7
22.5°	1829.3	1825.1	1830.1	1831.6	1832.1	1832.1
25°	1773.3	1768.3	1774.1	1772.9	1770.2	1769.4
27.5°	1713.1	1710.6	1713.7	1711.9	1703.3	1697.3
30°	1651.2	1642.8	1652.5	1643.9	1625.2	1620.1
32.5°	1578.2	1578.2	1579.6	1566.7	1543.8	1542.1
35°	1502.8	1505.4	1505.0	1481.3	1455.8	1454.1
37.5°	1419.7	1427.3	1421.9	1395.6	1368.5	1366.7
40°	1332.4	1350.1	1333.9	1302.3	1279.4	1288.7
42.5°	1240.9	1261.9	1242.2	1201.6	1190.4	1202.2
45°	1143.3	1170.4	1144.7	1108.3	1104.9	1125.2
47.5°	1047.5	1080.4	1048.3	1015.8	1026.0	1047.2
50°	941.6	959.3	943.1	929.3	949.7	975.2
52.5°	846.7	836.3	848.1	846.4	876.8	897.9
55°	744.3	711.8	745.5	765.8	804.8	817.6
57.5°	642.4	600.8	643.8	687.8	734.5	748.9
60°	542.4	512.6	543.1	610.8	663.3	675.2
62.5°	455.0	439.0	455.7	532.8	590.4	598.9
65°	381.2	375.4	381.9	452.3	512.6	523.6
67.5°	318.5	317.6	318.5	381.9	437.9	454.8
70°	265.1	271.0	265.1	312.5	363.5	387.2
72.5°	215.2	223.7	215.9	252.4	297.4	325.3
75°	172.8	186.4	172.8	199.2	236.3	274.4
77.5°	133.0	149.1	133.0	154.2	196.7	239.2
80°	100.8	112.6	100.8	124.0	171.5	214.4
82.5°	72.7	77.8	72.7	109.4	159.5	201.2
85°	54.8	43.1	56.2	108.4	160.5	191.1
87.5°	45.0	12.7	54.6	114.8	169.0	192.2
90°	31.1	1.6	57.1	127.6	181.6	197.8
92.5°	18.3	11.9	65.8	142.8	198.6	211.1
95°	7.0	28.3	75.8	160.5	217.6	225.1
97.5°	9.9	49.6	97.9	175.4	236.7	243.4
100°	24.3	76.5	127.5	195.4	248.3	255.0
102.5°	44.3	104.8	155.6	217.6	269.0	281.5
105°	71.1	137.0	185.2	251.3	291.3	305.1
107.5°	102.0	171.5	215.4	281.6	321.1	329.6
110°	135.0	207.2	245.7	311.1	353.2	363.1



TEST NUMBER: P392575

CATALOG NUMBER: MWL-3-27-57-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	170.7	244.2	277.2	338.6	388.2	395.3
115°	212.2	278.6	307.6	371.0	416.3	420.7
117.5°	248.5	320.7	337.8	394.4	445.9	447.5
120°	287.1	359.9	368.1	426.7	474.8	481.2
122.5°	326.3	396.9	396.9	454.2	500.2	504.5
125°	362.6	436.8	425.8	474.8	523.6	525.8
127.5°	399.8	477.4	457.4	501.6	547.2	545.0
130°	441.1	515.8	487.2	527.1	568.4	561.6
132.5°	478.2	558.0	516.7	553.1	589.7	593.8
135°	515.3	596.4	542.2	575.8	611.7	610.3
137.5°	551.0	632.2	573.1	593.7	626.2	630.3
140°	586.2	670.6	600.6	617.1	644.0	644.7
142.5°	623.2	709.1	630.8	641.3	663.9	659.9
145°	664.4	745.5	668.6	664.6	679.1	670.1
147.5°	700.8	777.1	695.4	681.0	699.0	687.3
150°	742.3	809.4	733.4	705.1	716.1	710.6
152.5°	778.6	834.9	773.1	723.5	736.1	729.2
155°	814.9	861.7	812.2	742.1	751.2	748.5
157.5°	846.6	885.1	841.8	761.3	771.8	766.3
160°	874.0	904.3	876.1	790.2	784.7	785.6
162.5°	899.0	923.6	901.0	829.3	799.8	787.7
165°	920.3	938.1	922.3	874.2	828.6	817.9
167.5°	940.2	951.9	946.4	909.9	873.3	848.6
170°	956.0	962.8	955.3	940.2	921.5	899.3
172.5°	964.2	967.0	971.8	962.1	954.5	939.9
175°	969.0	976.5	972.5	975.9	968.9	965.3
177.5°	970.4	971.8	971.0	977.2	979.9	974.2
180°	975.1	975.1	975.1	975.1	975.1	975.1

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