

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: P392574

Luminaire Tested: **MWL-3-27-57-UNV-L930-EDD**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P392574  
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-L930-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

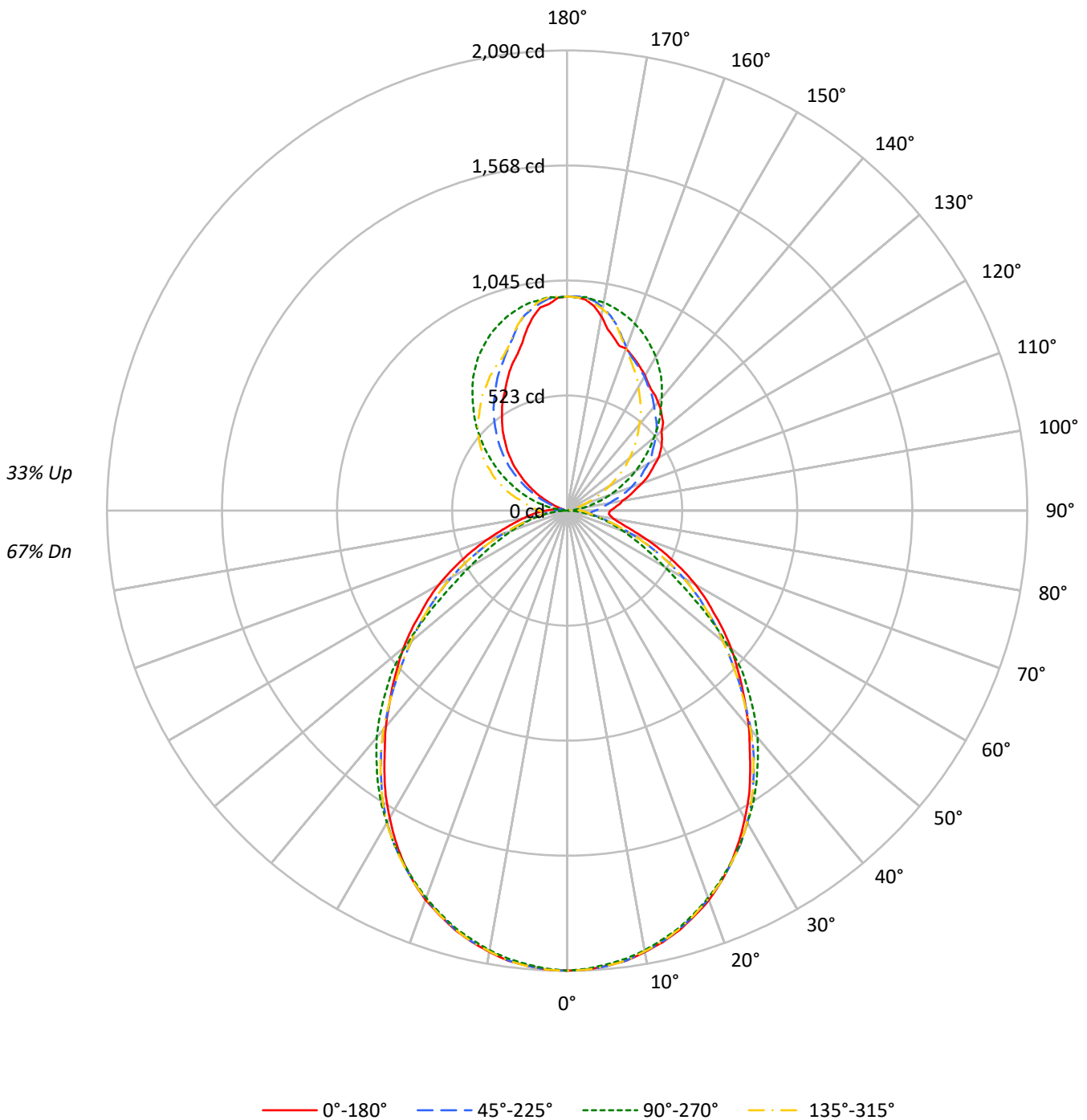
Lumens per Lamp: N/A  
Luminaire Lumens: 7176.1 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Semi-Direct

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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CATALOG NUMBER: MWL-3-27-57-UNV-L930-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	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°	17995	17995	17995	17995
5°	17727	16447	17727	16447
10°	17375	15075	17375	15075
15°	16955	13798	16937	13798
20°	16426	12577	16408	12577
25°	15735	11419	15717	11419
30°	14863	10320	14837	10320
35°	13882	9276	13862	9276
40°	12930	8224	12902	8224
45°	11990	7102	11967	7102
50°	11170	5843	11146	5843
55°	10207	4386	10189	4386
60°	9342	3220	9332	3220
65°	8192	2423	8192	2423
70°	7031	1814	7043	1814
75°	5993	1306	6039	1306
80°	5928	835	5567	835
85°	7274	342	5579	342



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	196.8	2.7
10°-20°	554.0	7.7
20°-30°	811.9	11.3
30°-40°	920.7	12.8
40°-50°	865.6	12.1
50°-60°	687.0	9.6
60°-70°	446.7	6.2
70°-80°	227.8	3.2
80°-90°	113.5	1.6
90°-100°	101.7	1.4
100°-110°	154.3	2.2
110°-120°	259.6	3.6
120°-130°	351.9	4.9
130°-140°	401.1	5.6
140°-150°	399.8	5.6
150°-160°	347.9	4.8
160°-170°	244.7	3.4
170°-180°	91.1	1.3
0°-30°	1562.6	21.8
0°-40°	2483.3	34.6
0°-60°	4035.9	56.2
0°-90°	4823.9	67.2
90°-120°	515.6	7.2
90°-150°	1668.5	23.3
90°-180°	2352.0	32.8
0°-180°	7176.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2090	2090	2090	2090	2090	
5°	2076	2069	2076	2069	2076	197
15°	1973	1962	1971	1962	1973	555
25°	1763	1762	1761	1762	1763	810
35°	1449	1500	1447	1500	1449	906
45°	1121	1166	1119	1166	1121	866
55°	815	709	813	709	815	733
65°	522	374	522	374	522	520
75°	274	186	276	186	274	300
85°	190	43	146	43	190	162
90°	197	2	94	2	197	109
95°	224	28	62	28	224	190
105°	304	137	16	137	304	323
115°	419	278	99	278	419	416
125°	524	435	240	435	524	468
135°	608	594	384	594	608	469
145°	668	743	515	743	668	421
155°	746	859	647	859	746	344
165°	815	935	788	935	815	231
175°	962	973	941	973	962	90
180°	972	972	972	972	972	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7
2.5°	2086.7	2087.3	2087.0	2084.2	2082.6	2083.6	2087.0	2087.3	2087.5	2087.3	2087.0
5°	2075.7	2078.0	2076.8	2072.6	2069.2	2072.6	2076.1	2078.0	2075.7	2078.0	2076.1
7.5°	2062.1	2060.9	2060.9	2054.8	2052.3	2054.2	2060.3	2060.3	2062.1	2060.3	2060.3
10°	2035.7	2036.4	2033.1	2030.5	2028.0	2029.8	2032.4	2035.1	2035.7	2035.1	2032.4
12.5°	2007.5	2006.0	2004.5	2000.2	1995.4	2000.2	2004.5	2004.6	2006.1	2004.6	2004.5
15°	1972.7	1967.1	1968.2	1965.6	1962.4	1964.9	1967.5	1965.8	1970.6	1965.8	1967.5
17.5°	1928.7	1926.5	1925.0	1923.5	1918.4	1923.5	1924.3	1925.9	1926.7	1925.9	1924.3
20°	1883.1	1879.9	1876.9	1877.0	1872.0	1876.3	1876.2	1878.5	1881.1	1878.5	1876.2
22.5°	1825.8	1825.8	1825.3	1823.8	1818.8	1823.1	1824.7	1824.5	1824.5	1824.5	1824.7
25°	1763.3	1764.2	1766.8	1768.0	1762.2	1767.3	1765.5	1762.1	1761.3	1762.1	1765.5
27.5°	1691.4	1697.3	1706.0	1707.8	1704.7	1707.2	1704.6	1695.3	1689.4	1695.3	1704.6
30°	1614.6	1619.6	1638.2	1646.8	1637.1	1645.5	1636.1	1617.6	1611.8	1617.6	1636.1
32.5°	1536.8	1538.5	1561.3	1574.2	1572.8	1572.8	1559.3	1535.7	1534.0	1535.7	1559.3
35°	1449.0	1450.8	1476.2	1499.8	1500.2	1497.6	1474.0	1448.7	1446.9	1448.7	1474.0
37.5°	1362.0	1363.7	1390.7	1417.0	1422.4	1414.9	1388.6	1361.6	1359.9	1361.6	1388.6
40°	1284.3	1275.0	1297.8	1329.3	1345.5	1327.8	1295.0	1272.2	1281.5	1272.2	1295.0
42.5°	1198.1	1186.3	1197.4	1238.0	1257.6	1236.6	1195.3	1183.5	1195.3	1183.5	1195.3
45°	1121.3	1101.1	1104.4	1140.8	1166.3	1139.4	1101.7	1099.0	1119.2	1099.0	1101.7
47.5°	1043.6	1022.4	1012.3	1044.6	1076.8	1043.8	1009.6	1020.3	1041.5	1020.3	1009.6
50°	971.8	946.4	926.1	939.8	956.0	938.3	923.4	943.6	969.7	943.6	923.4
52.5°	894.9	873.7	843.5	845.2	833.4	843.8	841.4	871.0	892.7	871.0	841.4
55°	814.7	802.0	763.2	743.0	709.3	741.6	761.1	799.9	813.3	799.9	761.1
57.5°	746.3	732.0	685.5	641.6	598.7	640.2	683.4	729.8	744.9	729.8	683.4
60°	672.9	661.0	608.6	541.2	510.8	540.5	607.3	659.7	672.2	659.7	607.3
62.5°	596.8	588.4	530.9	454.2	437.4	453.5	529.5	587.0	596.1	587.0	529.5
65°	521.8	510.8	450.8	380.6	374.0	379.9	450.1	510.1	521.8	510.1	450.1
67.5°	453.3	436.4	380.6	317.4	316.5	317.4	379.9	435.8	453.3	435.8	379.9
70°	385.8	362.2	311.5	264.2	270.0	264.2	311.5	362.9	386.5	362.9	311.5
72.5°	324.2	296.3	251.5	215.2	222.9	214.5	251.5	297.0	325.5	297.0	251.5
75°	273.5	235.4	198.5	172.2	185.8	172.2	199.1	236.2	275.6	236.2	199.1
77.5°	238.4	196.0	153.6	132.5	148.5	132.5	154.4	193.9	235.7	193.9	154.4
80°	213.7	170.9	123.5	100.4	112.3	100.4	122.2	159.9	200.7	159.9	122.2
82.5°	200.6	158.8	109.0	72.5	77.6	72.5	100.7	134.3	174.5	134.3	100.7
85°	190.5	160.0	108.0	55.9	43.0	54.6	88.1	118.3	146.1	118.3	88.1
87.5°	191.5	168.4	114.4	54.4	12.7	44.9	75.3	102.7	121.0	102.7	75.3
90°	197.1	180.9	127.1	57.0	1.5	30.9	59.3	84.4	94.4	84.4	59.3
92.5°	210.4	197.9	142.3	65.5	11.8	18.2	48.5	71.1	76.2	71.1	48.5
95°	224.4	216.9	160.0	75.5	28.3	7.0	36.7	57.9	62.0	57.9	36.7
97.5°	242.7	235.9	174.9	97.6	49.4	9.9	23.6	47.5	50.9	47.5	23.6
100°	254.1	247.5	194.7	127.1	76.3	24.2	13.3	32.6	38.5	32.6	13.3
102.5°	280.5	268.0	216.9	155.1	104.4	44.1	12.9	21.6	25.8	21.6	12.9
105°	304.0	290.3	250.4	184.6	136.6	70.8	29.2	15.0	15.8	15.0	29.2
107.5°	328.5	320.0	280.5	214.7	170.9	101.7	52.6	29.6	21.7	29.6	52.6
110°	361.9	352.0	310.0	244.9	206.5	134.5	79.2	50.6	41.3	50.6	79.2



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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°	393.9	386.9	337.4	276.3	243.4	170.1	112.2	78.0	68.6	78.0	112.2
115°	419.3	415.0	369.7	306.6	277.7	211.4	149.2	110.2	98.7	110.2	149.2
117.5°	446.0	444.5	393.1	336.7	319.6	247.7	182.8	142.4	130.2	142.4	182.8
120°	479.5	473.2	425.3	366.8	358.6	286.1	219.8	179.4	167.2	179.4	219.8
122.5°	502.8	498.5	452.7	395.6	395.6	325.1	255.3	215.0	202.2	215.0	255.3
125°	524.0	521.8	473.2	424.4	435.3	361.4	295.1	254.0	239.8	254.0	295.1
127.5°	543.2	545.3	499.9	455.8	475.7	398.3	334.1	289.8	274.1	289.8	334.1
130°	559.6	566.4	525.2	485.5	514.0	439.6	369.0	324.7	314.4	324.7	369.0
132.5°	591.8	587.6	551.3	514.9	555.9	476.5	406.1	359.7	348.0	359.7	406.1
135°	608.2	609.6	573.8	540.3	594.3	513.6	441.0	395.3	383.5	395.3	441.0
137.5°	628.1	624.0	591.6	571.1	630.0	549.2	475.2	432.9	414.5	432.9	475.2
140°	642.4	641.8	614.9	598.5	668.3	584.1	510.2	467.2	450.0	467.2	510.2
142.5°	657.6	661.6	639.1	628.6	706.7	621.0	548.6	500.7	484.3	500.7	548.6
145°	667.8	676.8	662.3	666.3	743.0	662.1	581.5	532.9	515.1	532.9	581.5
147.5°	684.9	696.7	678.6	693.0	774.4	698.5	613.5	566.4	550.7	566.4	613.5
150°	708.2	713.6	702.6	730.8	806.6	739.7	647.1	598.7	582.9	598.7	647.1
152.5°	726.7	733.5	721.0	770.3	832.0	775.9	684.1	630.1	611.7	630.1	684.1
155°	745.9	748.6	739.5	809.4	858.7	812.2	713.5	665.1	647.3	665.1	713.5
157.5°	763.7	769.1	758.7	838.9	882.0	843.7	747.1	700.0	684.2	700.0	747.1
160°	782.9	782.1	787.4	873.1	901.2	871.1	782.8	737.5	716.5	737.5	782.8
162.5°	785.0	797.1	826.5	897.9	920.5	895.9	821.0	764.9	746.6	764.9	821.0
165°	815.0	825.8	871.2	919.2	934.8	917.1	869.1	810.1	788.3	810.1	869.1
167.5°	845.7	870.4	906.8	943.1	948.7	936.9	905.4	864.2	843.7	864.2	905.4
170°	896.3	918.3	936.9	952.0	959.5	952.7	928.0	907.3	893.4	907.3	928.0
172.5°	936.6	951.1	958.9	968.5	963.6	960.9	948.7	938.2	930.4	938.2	948.7
175°	961.9	965.6	972.5	969.2	973.2	965.7	966.3	970.3	941.4	970.3	966.3
177.5°	970.8	976.5	973.9	967.8	968.5	967.1	969.9	971.7	966.8	971.7	969.9
180°	971.7	971.7	971.7	971.7	971.7	971.7	971.7	971.7	971.7	971.7	971.7



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2089.7	2089.7	2089.7	2089.7	2089.7	2089.7
2.5°	2083.6	2082.6	2084.2	2087.0	2087.3	2086.7
5°	2072.6	2069.2	2072.6	2076.8	2078.0	2075.7
7.5°	2054.2	2052.3	2054.8	2060.9	2060.9	2062.1
10°	2029.8	2028.0	2030.5	2033.1	2036.4	2035.7
12.5°	2000.2	1995.4	2000.2	2004.5	2006.0	2007.5
15°	1964.9	1962.4	1965.6	1968.2	1967.1	1972.7
17.5°	1923.5	1918.4	1923.5	1925.0	1926.5	1928.7
20°	1876.3	1872.0	1877.0	1876.9	1879.9	1883.1
22.5°	1823.1	1818.8	1823.8	1825.3	1825.8	1825.8
25°	1767.3	1762.2	1768.0	1766.8	1764.2	1763.3
27.5°	1707.2	1704.7	1707.8	1706.0	1697.3	1691.4
30°	1645.5	1637.1	1646.8	1638.2	1619.6	1614.6
32.5°	1572.8	1572.8	1574.2	1561.3	1538.5	1536.8
35°	1497.6	1500.2	1499.8	1476.2	1450.8	1449.0
37.5°	1414.9	1422.4	1417.0	1390.7	1363.7	1362.0
40°	1327.8	1345.5	1329.3	1297.8	1275.0	1284.3
42.5°	1236.6	1257.6	1238.0	1197.4	1186.3	1198.1
45°	1139.4	1166.3	1140.8	1104.4	1101.1	1121.3
47.5°	1043.8	1076.8	1044.6	1012.3	1022.4	1043.6
50°	938.3	956.0	939.8	926.1	946.4	971.8
52.5°	843.8	833.4	845.2	843.5	873.7	894.9
55°	741.6	709.3	743.0	763.2	802.0	814.7
57.5°	640.2	598.7	641.6	685.5	732.0	746.3
60°	540.5	510.8	541.2	608.6	661.0	672.9
62.5°	453.5	437.4	454.2	530.9	588.4	596.8
65°	379.9	374.0	380.6	450.8	510.8	521.8
67.5°	317.4	316.5	317.4	380.6	436.4	453.3
70°	264.2	270.0	264.2	311.5	362.2	385.8
72.5°	214.5	222.9	215.2	251.5	296.3	324.2
75°	172.2	185.8	172.2	198.5	235.4	273.5
77.5°	132.5	148.5	132.5	153.6	196.0	238.4
80°	100.4	112.3	100.4	123.5	170.9	213.7
82.5°	72.5	77.6	72.5	109.0	158.8	200.6
85°	54.6	43.0	55.9	108.0	160.0	190.5
87.5°	44.9	12.7	54.4	114.4	168.4	191.5
90°	30.9	1.5	57.0	127.1	180.9	197.1
92.5°	18.2	11.8	65.5	142.3	197.9	210.4
95°	7.0	28.3	75.5	160.0	216.9	224.4
97.5°	9.9	49.4	97.6	174.9	235.9	242.7
100°	24.2	76.3	127.1	194.7	247.5	254.1
102.5°	44.1	104.4	155.1	216.9	268.0	280.5
105°	70.8	136.6	184.6	250.4	290.3	304.0
107.5°	101.7	170.9	214.7	280.5	320.0	328.5
110°	134.5	206.5	244.9	310.0	352.0	361.9





TEST NUMBER: P392574

CATALOG NUMBER: MWL-3-27-57-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	170.1	243.4	276.3	337.4	386.9	393.9
115°	211.4	277.7	306.6	369.7	415.0	419.3
117.5°	247.7	319.6	336.7	393.1	444.5	446.0
120°	286.1	358.6	366.8	425.3	473.2	479.5
122.5°	325.1	395.6	395.6	452.7	498.5	502.8
125°	361.4	435.3	424.4	473.2	521.8	524.0
127.5°	398.3	475.7	455.8	499.9	545.3	543.2
130°	439.6	514.0	485.5	525.2	566.4	559.6
132.5°	476.5	555.9	514.9	551.3	587.6	591.8
135°	513.6	594.3	540.3	573.8	609.6	608.2
137.5°	549.2	630.0	571.1	591.6	624.0	628.1
140°	584.1	668.3	598.5	614.9	641.8	642.4
142.5°	621.0	706.7	628.6	639.1	661.6	657.6
145°	662.1	743.0	666.3	662.3	676.8	667.8
147.5°	698.5	774.4	693.0	678.6	696.7	684.9
150°	739.7	806.6	730.8	702.6	713.6	708.2
152.5°	775.9	832.0	770.3	721.0	733.5	726.7
155°	812.2	858.7	809.4	739.5	748.6	745.9
157.5°	843.7	882.0	838.9	758.7	769.1	763.7
160°	871.1	901.2	873.1	787.4	782.1	782.9
162.5°	895.9	920.5	897.9	826.5	797.1	785.0
165°	917.1	934.8	919.2	871.2	825.8	815.0
167.5°	936.9	948.7	943.1	906.8	870.4	845.7
170°	952.7	959.5	952.0	936.9	918.3	896.3
172.5°	960.9	963.6	968.5	958.9	951.1	936.6
175°	965.7	973.2	969.2	972.5	965.6	961.9
177.5°	967.1	968.5	967.8	973.9	976.5	970.8
180°	971.7	971.7	971.7	971.7	971.7	971.7

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