

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: P392653

Luminaire Tested: **MWL-4-26-73-UNV-L935-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392653
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-4-26-73-UNV-L935-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

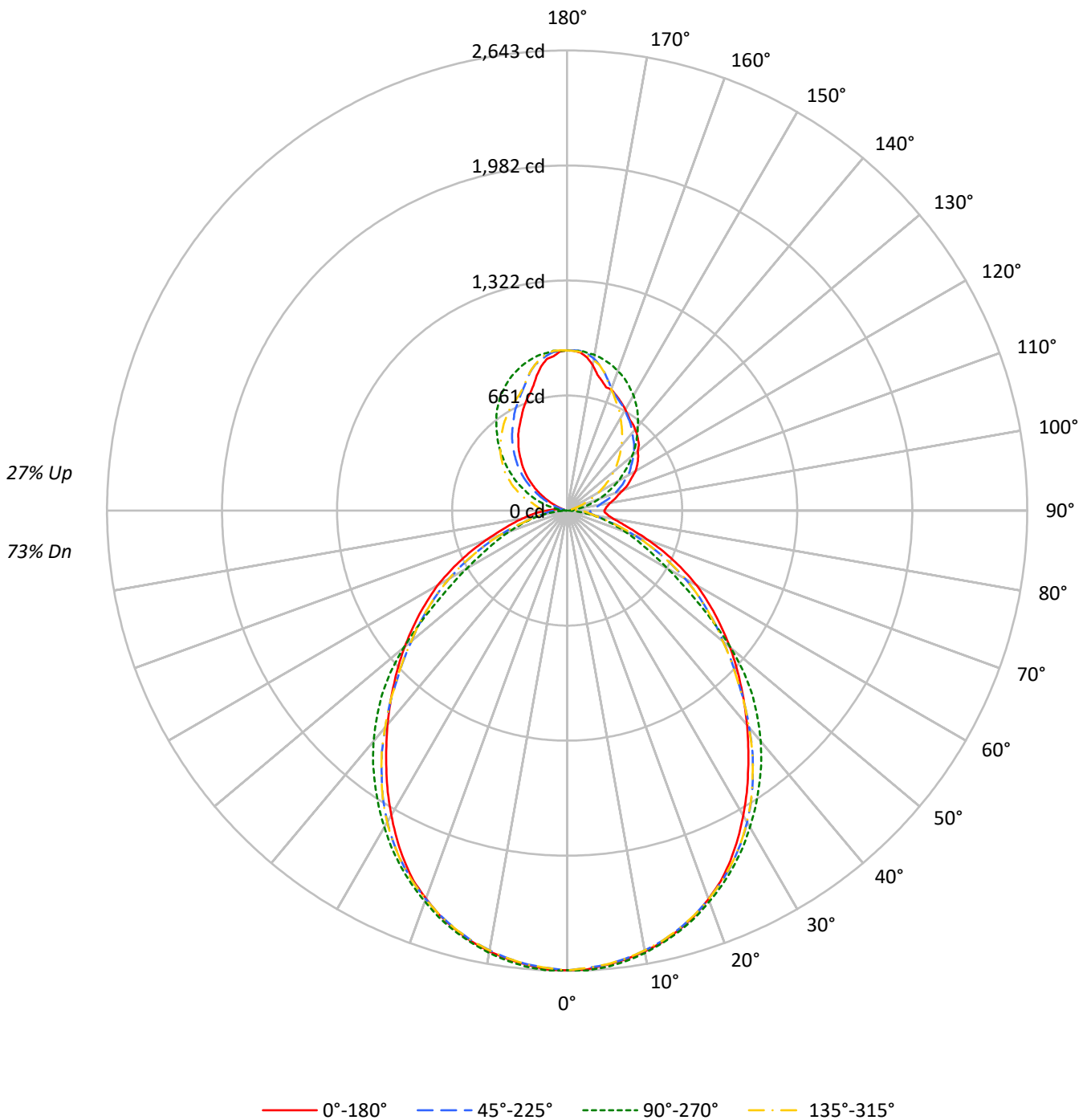
Lumens per Lamp: N/A
Luminaire Lumens: 8377.0 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Semi-Direct

Input Watts (W): 109.181
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	50	30	10	0	
RCR																						
0	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	77	77	77	73	
1	103	99	95	91	98	94	91	87	85	82	80	77	75	73	69	67	66	66	66	66	62	
2	94	87	81	76	89	83	77	73	75	71	67	68	65	62	61	59	56	56	56	56	53	
3	87	77	70	64	82	73	67	61	67	61	57	61	56	53	55	51	49	49	49	49	45	
4	79	69	61	54	75	65	58	53	60	54	49	54	50	46	49	45	42	42	42	42	39	
5	73	61	53	47	69	59	51	46	54	48	43	49	44	40	45	41	37	37	37	37	34	
6	68	55	47	41	64	53	46	40	49	42	38	45	39	35	41	36	33	33	33	33	31	
7	63	50	42	37	60	48	41	35	44	38	33	41	35	31	37	33	29	29	29	29	27	
8	59	46	38	33	56	44	37	32	41	34	30	37	32	28	34	30	27	27	27	27	24	
9	55	42	34	29	52	41	33	29	37	31	27	35	29	26	32	27	24	24	24	24	22	
10	51	39	31	27	49	37	31	26	35	29	25	32	27	23	30	25	22	22	22	22	20	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17052	17052	17052	17052
5°	16825	15683	16825	15683
10°	16556	14384	16556	14384
15°	16201	13183	16188	13183
20°	15718	12038	15705	12038
25°	15077	10976	15064	10976
30°	14228	9928	14210	9928
35°	13319	8915	13305	8915
40°	12462	7930	12442	7930
45°	11649	6885	11633	6885
50°	10905	5626	10887	5626
55°	10148	4233	10135	4233
60°	9412	3149	9404	3149
65°	8372	2372	8372	2372
70°	7277	1784	7286	1784
75°	6346	1278	6382	1278
80°	6278	822	5990	822
85°	7760	368	6339	368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.9	3.0
10°-20°	702.2	8.4
20°-30°	1029.7	12.3
30°-40°	1165.4	13.9
40°-50°	1098.0	13.1
50°-60°	878.6	10.5
60°-70°	578.4	6.9
70°-80°	295.3	3.5
80°-90°	141.0	1.7
90°-100°	106.9	1.3
100°-110°	147.9	1.8
110°-120°	245.8	2.9
120°-130°	333.3	4.0
130°-140°	379.7	4.5
140°-150°	378.5	4.5
150°-160°	329.3	3.9
160°-170°	231.6	2.8
170°-180°	86.2	1.0
0°-30°	1980.8	23.6
0°-40°	3146.3	37.6
0°-60°	5123.0	61.2
0°-90°	6137.7	73.3
90°-120°	500.6	6.0
90°-150°	1592.2	19.0
90°-180°	2239.0	26.7
0°-180°	8377.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2640	2640	2640	2640	2640	
5°	2619	2631	2619	2631	2619	249
15°	2491	2500	2489	2500	2491	701
25°	2219	2258	2217	2258	2219	1019
35°	1813	1923	1811	1923	1813	1134
45°	1408	1508	1406	1508	1408	1089
55°	1035	913	1034	913	1035	927
65°	670	488	670	488	670	666
75°	353	242	355	242	353	385
85°	229	62	187	62	229	194
90°	214	2	116	2	214	118
95°	226	28	72	28	226	190
105°	291	129	18	129	291	309
115°	397	264	94	264	397	394
125°	496	412	227	412	496	443
135°	575	562	363	562	575	444
145°	632	703	487	703	632	399
155°	706	813	612	813	706	325
165°	771	885	746	885	771	219
175°	910	921	890	921	910	85
180°	920	920	920	920	920	



TEST NUMBER: P392653

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3
2.5°	2637.5	2637.1	2629.9	2644.2	2643.3	2643.5	2629.9	2637.1	2638.1	2637.1	2629.9
5°	2618.9	2623.6	2617.2	2631.6	2630.8	2631.6	2616.6	2623.6	2618.9	2623.6	2616.6
7.5°	2599.1	2605.5	2594.5	2611.3	2609.6	2610.6	2593.9	2604.9	2599.1	2604.9	2593.9
10°	2571.0	2573.3	2565.7	2580.9	2580.1	2580.3	2565.1	2572.0	2571.0	2572.0	2565.1
12.5°	2536.7	2536.0	2530.3	2543.8	2542.4	2543.8	2530.3	2534.7	2535.4	2534.7	2530.3
15°	2490.7	2490.2	2486.2	2499.7	2499.9	2499.0	2485.5	2488.9	2488.7	2488.9	2485.5
17.5°	2439.0	2437.6	2435.3	2449.9	2449.9	2449.9	2434.6	2437.0	2437.0	2437.0	2434.6
20°	2373.7	2376.3	2375.0	2389.7	2389.1	2389.1	2374.4	2375.0	2371.7	2375.0	2374.4
22.5°	2304.3	2306.8	2311.5	2330.3	2327.2	2329.7	2310.8	2305.6	2303.0	2305.6	2310.8
25°	2218.6	2223.7	2239.1	2259.1	2258.5	2258.5	2237.8	2221.8	2216.7	2221.8	2237.8
27.5°	2123.6	2137.2	2157.8	2182.6	2183.0	2181.9	2156.5	2135.2	2121.7	2135.2	2156.5
30°	2022.7	2037.1	2067.7	2102.6	2099.9	2101.3	2065.7	2035.1	2020.1	2035.1	2065.7
32.5°	1920.1	1934.5	1969.3	2011.0	2014.9	2009.8	1967.3	1931.9	1917.5	1931.9	1967.3
35°	1812.6	1819.3	1859.2	1921.9	1922.6	1920.1	1857.3	1817.5	1810.7	1817.5	1857.3
37.5°	1708.3	1709.9	1749.8	1816.0	1830.8	1814.1	1748.0	1708.1	1706.4	1708.1	1748.0
40°	1607.3	1598.9	1626.8	1700.9	1729.9	1699.6	1624.3	1596.3	1604.8	1596.3	1624.3
42.5°	1507.2	1497.0	1509.2	1582.1	1620.4	1580.8	1507.2	1494.5	1504.7	1494.5	1507.2
45°	1408.3	1389.6	1387.1	1460.0	1507.7	1458.7	1384.4	1387.7	1406.4	1387.7	1384.4
47.5°	1314.2	1292.1	1279.4	1335.5	1378.0	1334.9	1276.7	1290.1	1312.2	1290.1	1276.7
50°	1220.1	1198.8	1169.1	1208.3	1227.2	1207.0	1166.6	1196.2	1218.1	1196.2	1166.6
52.5°	1126.8	1110.6	1072.7	1086.2	1065.3	1084.9	1070.7	1108.0	1124.8	1108.0	1070.7
55°	1035.3	1020.9	974.2	956.7	912.8	955.3	972.3	1018.9	1034.0	1018.9	972.3
57.5°	945.4	936.9	879.3	826.9	779.6	825.6	877.3	935.0	944.2	935.0	877.3
60°	860.1	850.7	783.7	702.5	666.0	701.8	782.3	849.4	859.4	849.4	782.3
62.5°	763.3	759.1	683.6	592.2	568.7	591.5	682.3	757.7	762.6	757.7	682.3
65°	670.2	657.5	587.1	497.2	488.1	496.5	586.4	656.8	670.2	656.8	586.4
67.5°	580.3	561.7	496.3	415.1	417.6	415.1	495.7	561.0	580.3	561.0	495.7
70°	495.7	466.8	408.3	343.0	354.0	343.0	408.3	467.5	496.3	467.5	408.3
72.5°	416.8	381.2	327.8	279.4	293.3	278.8	327.8	381.9	418.2	381.9	327.8
75°	353.2	308.3	255.1	222.9	242.4	222.9	255.7	308.9	355.2	308.9	255.7
77.5°	306.7	255.8	199.2	172.0	195.7	172.0	199.8	253.9	304.1	253.9	199.8
80°	268.5	219.9	159.6	127.0	147.4	127.0	158.2	209.6	256.2	209.6	158.2
82.5°	242.5	199.4	140.1	91.4	103.3	91.4	132.4	176.0	217.9	176.0	132.4
85°	229.4	191.7	132.3	73.0	61.7	71.6	113.6	152.1	187.4	152.1	113.6
87.5°	215.5	189.3	130.7	67.4	22.9	58.3	93.8	127.1	148.9	127.1	93.8
90°	213.7	195.2	137.9	64.9	1.6	40.3	73.9	104.0	116.4	104.0	73.9
92.5°	220.0	207.2	148.3	68.9	12.1	24.2	59.6	87.4	93.1	87.4	59.6
95°	225.8	220.2	161.7	75.0	27.5	10.3	45.2	70.0	72.3	70.0	45.2
97.5°	238.2	234.9	173.3	92.3	47.6	9.5	30.2	56.9	56.9	56.9	30.2
100°	249.0	245.8	188.9	120.2	72.2	23.0	17.3	42.5	45.0	42.5	17.3
102.5°	271.6	260.3	206.9	146.7	98.8	41.9	14.0	27.2	30.6	27.2	14.0
105°	290.7	277.4	237.0	174.7	129.3	67.0	27.8	17.2	18.0	17.2	27.8
107.5°	310.9	302.8	265.4	204.0	161.6	97.1	49.8	28.2	20.9	28.2	49.8
110°	341.6	333.9	293.4	232.5	196.1	128.1	75.1	48.9	38.6	48.9	75.1



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CATALOG NUMBER: MWL-4-26-73-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	372.7	366.9	319.2	262.2	231.1	161.8	106.1	74.8	65.1	74.8	106.1
115°	396.7	392.5	349.8	290.0	263.5	200.0	141.3	104.4	93.6	104.4	141.3
117.5°	421.9	420.5	371.9	318.5	302.4	234.4	173.1	134.9	123.4	134.9	173.1
120°	453.6	447.6	402.3	347.1	339.3	270.6	208.0	169.8	158.3	169.8	208.0
122.5°	475.7	472.4	428.2	375.1	374.2	308.3	241.7	204.3	191.4	204.3	241.7
125°	495.7	494.4	447.6	402.3	411.9	342.7	279.2	241.3	227.0	241.3	279.2
127.5°	513.9	515.8	473.7	432.1	450.9	377.7	317.0	274.2	259.4	274.2	317.0
130°	529.5	535.9	497.7	459.3	487.1	415.9	350.1	307.4	297.6	307.4	350.1
132.5°	559.8	556.0	522.3	487.1	525.9	450.9	385.0	340.3	329.3	340.3	385.0
135°	575.4	576.7	543.7	511.1	562.3	485.8	418.0	374.0	362.9	374.0	418.0
137.5°	594.2	590.2	560.5	541.0	595.9	520.4	450.4	409.6	392.1	409.6	450.4
140°	607.8	607.1	582.5	567.0	632.2	553.4	483.5	442.0	425.8	442.0	483.5
142.5°	622.9	626.7	604.5	595.5	668.4	588.4	519.1	474.6	459.1	474.6	519.1
145°	631.7	641.0	626.6	631.1	702.8	627.2	550.1	505.1	487.3	505.1	550.1
147.5°	648.7	658.9	642.8	656.3	732.5	661.5	581.2	535.9	521.8	535.9	581.2
150°	670.0	675.1	665.4	691.4	763.0	699.7	613.0	566.3	551.4	566.3	613.0
152.5°	687.5	693.9	682.9	729.5	786.9	734.7	648.0	596.1	578.7	596.1	648.0
155°	705.6	708.1	700.4	766.4	813.0	769.0	675.7	629.1	612.3	629.1	675.7
157.5°	722.4	727.5	718.5	794.3	835.1	798.8	707.6	662.2	647.3	662.2	707.6
160°	740.5	740.5	745.7	826.7	853.2	824.8	741.2	698.4	677.7	698.4	741.2
162.5°	742.4	754.8	782.6	849.4	870.7	847.4	777.4	724.3	706.2	724.3	777.4
165°	771.0	782.0	824.1	869.5	885.2	867.5	822.1	767.0	745.7	767.0	822.1
167.5°	799.9	823.2	857.7	892.9	898.1	887.1	856.4	817.3	797.9	817.3	856.4
170°	847.6	869.5	886.2	901.3	908.5	902.0	877.8	859.0	845.0	859.0	877.8
172.5°	885.8	900.4	906.9	916.8	912.3	909.8	897.2	888.2	880.1	888.2	897.2
175°	909.8	914.1	919.9	917.5	921.4	914.3	914.1	918.6	890.3	918.6	914.1
177.5°	918.2	924.5	921.1	916.2	916.8	915.5	917.3	919.9	914.3	919.9	917.3
180°	919.9	919.9	919.9	919.9	919.9	919.9	919.9	919.9	919.9	919.9	919.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3
2.5°	2643.5	2643.3	2644.2	2629.9	2637.1	2637.5
5°	2631.6	2630.8	2631.6	2617.2	2623.6	2618.9
7.5°	2610.6	2609.6	2611.3	2594.5	2605.5	2599.1
10°	2580.3	2580.1	2580.9	2565.7	2573.3	2571.0
12.5°	2543.8	2542.4	2543.8	2530.3	2536.0	2536.7
15°	2499.0	2499.9	2499.7	2486.2	2490.2	2490.7
17.5°	2449.9	2449.9	2449.9	2435.3	2437.6	2439.0
20°	2389.1	2389.1	2389.7	2375.0	2376.3	2373.7
22.5°	2329.7	2327.2	2330.3	2311.5	2306.8	2304.3
25°	2258.5	2258.5	2259.1	2239.1	2223.7	2218.6
27.5°	2181.9	2183.0	2182.6	2157.8	2137.2	2123.6
30°	2101.3	2099.9	2102.6	2067.7	2037.1	2022.7
32.5°	2009.8	2014.9	2011.0	1969.3	1934.5	1920.1
35°	1920.1	1922.6	1921.9	1859.2	1819.3	1812.6
37.5°	1814.1	1830.8	1816.0	1749.8	1709.9	1708.3
40°	1699.6	1729.9	1700.9	1626.8	1598.9	1607.3
42.5°	1580.8	1620.4	1582.1	1509.2	1497.0	1507.2
45°	1458.7	1507.7	1460.0	1387.1	1389.6	1408.3
47.5°	1334.9	1378.0	1335.5	1279.4	1292.1	1314.2
50°	1207.0	1227.2	1208.3	1169.1	1198.8	1220.1
52.5°	1084.9	1065.3	1086.2	1072.7	1110.6	1126.8
55°	955.3	912.8	956.7	974.2	1020.9	1035.3
57.5°	825.6	779.6	826.9	879.3	936.9	945.4
60°	701.8	666.0	702.5	783.7	850.7	860.1
62.5°	591.5	568.7	592.2	683.6	759.1	763.3
65°	496.5	488.1	497.2	587.1	657.5	670.2
67.5°	415.1	417.6	415.1	496.3	561.7	580.3
70°	343.0	354.0	343.0	408.3	466.8	495.7
72.5°	278.8	293.3	279.4	327.8	381.2	416.8
75°	222.9	242.4	222.9	255.1	308.3	353.2
77.5°	172.0	195.7	172.0	199.2	255.8	306.7
80°	127.0	147.4	127.0	159.6	219.9	268.5
82.5°	91.4	103.3	91.4	140.1	199.4	242.5
85°	71.6	61.7	73.0	132.3	191.7	229.4
87.5°	58.3	22.9	67.4	130.7	189.3	215.5
90°	40.3	1.6	64.9	137.9	195.2	213.7
92.5°	24.2	12.1	68.9	148.3	207.2	220.0
95°	10.3	27.5	75.0	161.7	220.2	225.8
97.5°	9.5	47.6	92.3	173.3	234.9	238.2
100°	23.0	72.2	120.2	188.9	245.8	249.0
102.5°	41.9	98.8	146.7	206.9	260.3	271.6
105°	67.0	129.3	174.7	237.0	277.4	290.7
107.5°	97.1	161.6	204.0	265.4	302.8	310.9
110°	128.1	196.1	232.5	293.4	333.9	341.6



TEST NUMBER: P392653

CATALOG NUMBER: MWL-4-26-73-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	161.8	231.1	262.2	319.2	366.9	372.7
115°	200.0	263.5	290.0	349.8	392.5	396.7
117.5°	234.4	302.4	318.5	371.9	420.5	421.9
120°	270.6	339.3	347.1	402.3	447.6	453.6
122.5°	308.3	374.2	375.1	428.2	472.4	475.7
125°	342.7	411.9	402.3	447.6	494.4	495.7
127.5°	377.7	450.9	432.1	473.7	515.8	513.9
130°	415.9	487.1	459.3	497.7	535.9	529.5
132.5°	450.9	525.9	487.1	522.3	556.0	559.8
135°	485.8	562.3	511.1	543.7	576.7	575.4
137.5°	520.4	595.9	541.0	560.5	590.2	594.2
140°	553.4	632.2	567.0	582.5	607.1	607.8
142.5°	588.4	668.4	595.5	604.5	626.7	622.9
145°	627.2	702.8	631.1	626.6	641.0	631.7
147.5°	661.5	732.5	656.3	642.8	658.9	648.7
150°	699.7	763.0	691.4	665.4	675.1	670.0
152.5°	734.7	786.9	729.5	682.9	693.9	687.5
155°	769.0	813.0	766.4	700.4	708.1	705.6
157.5°	798.8	835.1	794.3	718.5	727.5	722.4
160°	824.8	853.2	826.7	745.7	740.5	740.5
162.5°	847.4	870.7	849.4	782.6	754.8	742.4
165°	867.5	885.2	869.5	824.1	782.0	771.0
167.5°	887.1	898.1	892.9	857.7	823.2	799.9
170°	902.0	908.5	901.3	886.2	869.5	847.6
172.5°	909.8	912.3	916.8	906.9	900.4	885.8
175°	914.3	921.4	917.5	919.9	914.1	909.8
177.5°	915.5	916.8	916.2	921.1	924.5	918.2
180°	919.9	919.9	919.9	919.9	919.9	919.9

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