

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: METALUX

Report Number: P197411

Luminaire Tested: **8WSL-LD2-65-UPL8-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197411
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L840
Light Source: (476) 4000K CCT, 80 CRI LEDS
EL236N0119D840
Ballast/Driver: OSRAM
OT50W

Summary

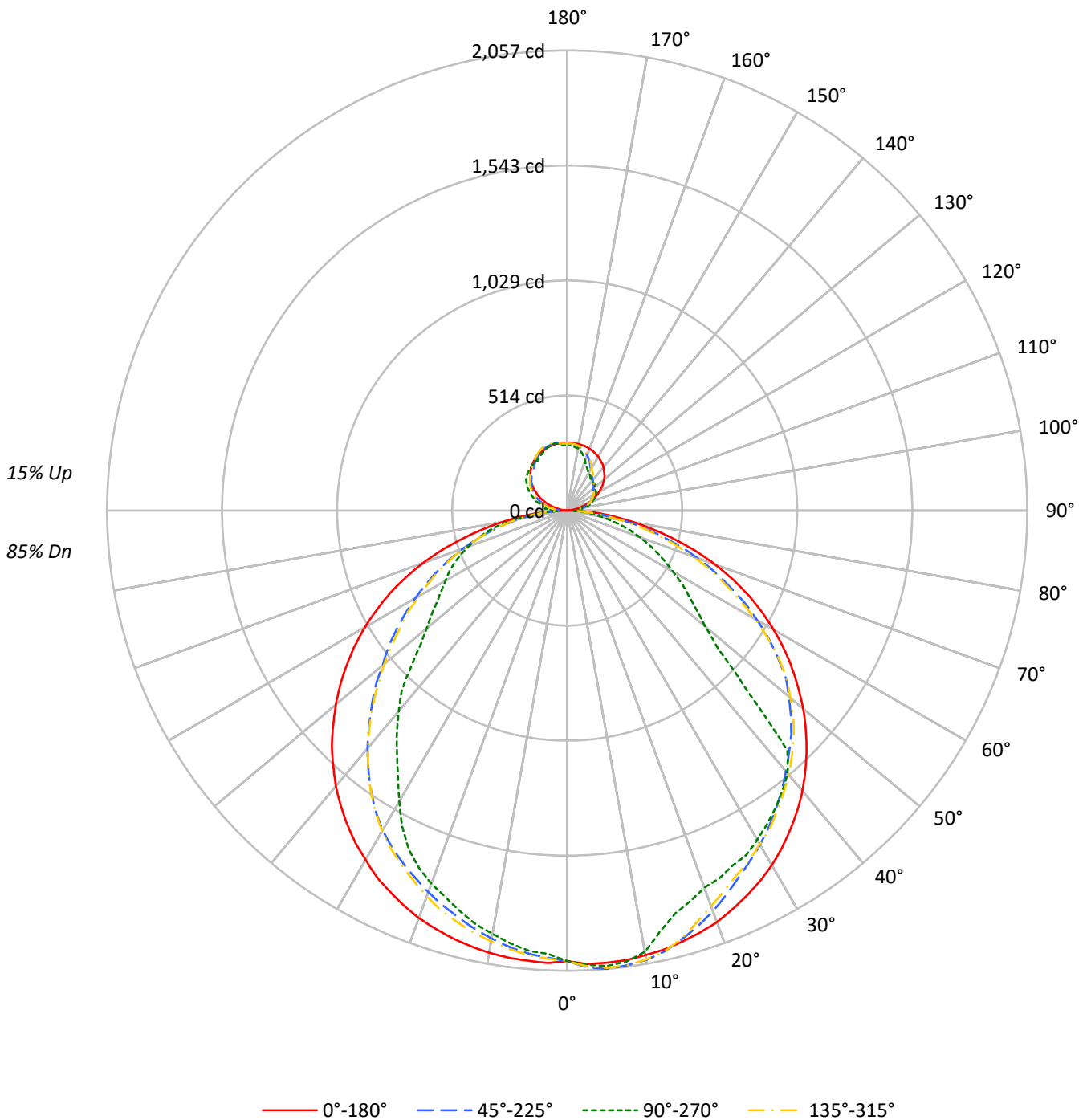
Lumens per Lamp: N/A
Luminaire Lumens: 6678.7 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 57.6
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

TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

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	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	5703	5703	5703	5703
5°	5768	5811	5744	5615
10°	5804	5761	5773	5525
15°	5848	5469	5803	5437
20°	5901	5407	5842	5348
25°	5936	5471	5869	5229
30°	5987	5556	5895	4908
35°	6016	5613	5927	4585
40°	6051	5668	5947	4329
45°	6063	4560	5959	3955
50°	6071	3543	5947	3610
55°	6058	3279	5941	3503
60°	6045	3090	5911	3554
65°	5982	2962	5852	3728
70°	5821	2856	5678	3893
75°	5450	2690	5285	4105
80°	4959	2462	4747	3904
85°	4836	2662	4345	3504



TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.4	2.9
10°-20°	543.6	8.1
20°-30°	822.8	12.3
30°-40°	993.6	14.9
40°-50°	1014.4	15.2
50°-60°	886.9	13.3
60°-70°	687.4	10.3
70°-80°	413.3	6.2
80°-90°	127.6	1.9
90°-100°	53.8	0.8
100°-110°	102.8	1.5
110°-120°	139.7	2.1
120°-130°	158.8	2.4
130°-140°	161.1	2.4
140°-150°	148.3	2.2
150°-160°	122.3	1.8
160°-170°	82.3	1.2
170°-180°	28.6	0.4
0°-30°	1557.8	23.3
0°-40°	2551.4	38.2
0°-60°	4452.7	66.7
0°-90°	5680.9	85.1
90°-120°	296.3	4.4
90°-150°	764.6	11.4
90°-180°	998.0	14.9
0°-180°	6678.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2014	2014	2014	2014	2014	
5°	2029	2044	2020	1975	2029	193
15°	1994	1865	1979	1854	1994	564
25°	1899	1750	1878	1673	1899	877
35°	1740	1623	1714	1326	1740	1089
45°	1513	1138	1488	987	1513	1167
55°	1227	664	1203	709	1227	1096
65°	892	442	873	556	892	881
75°	498	246	483	375	498	528
85°	149	82	134	108	149	150
90°	2	45	2	52	2	10
95°	13	62	13	99	13	16
105°	69	106	67	134	69	74
115°	134	136	132	181	134	132
125°	192	155	188	222	192	170
135°	235	170	233	246	235	181
145°	265	181	263	261	265	167
155°	287	211	285	276	287	132
165°	300	263	298	300	300	85
175°	304	289	304	298	304	29
180°	300	300	300	300	300	



TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5
2.5°	2028.6	2017.8	2043.7	2048.0	2032.9	2037.3	2039.4	2015.7	2024.3	1992.0	2000.6
5°	2028.6	2026.5	2056.7	2052.3	2043.7	2045.9	2052.3	2024.3	2020.0	1981.2	1987.7
7.5°	2026.5	2030.8	2050.2	2045.9	2032.9	2039.4	2050.2	2028.6	2015.7	1970.4	1968.3
10°	2017.8	2024.3	2039.4	2026.5	2002.8	2013.5	2037.3	2024.3	2007.1	1953.2	1942.4
12.5°	2009.2	2013.5	2017.8	1964.0	1925.1	1951.0	2017.8	2013.5	1994.1	1933.8	1914.4
15°	1994.1	2000.6	1983.4	1905.7	1864.8	1890.7	1979.0	1996.3	1979.0	1905.7	1882.0
17.5°	1976.9	1983.4	1946.7	1860.5	1830.3	1843.2	1929.5	1974.7	1959.6	1879.9	1849.7
20°	1957.5	1964.0	1905.7	1813.0	1793.6	1804.4	1882.0	1951.0	1938.1	1849.7	1815.2
22.5°	1929.5	1940.2	1858.3	1780.7	1778.6	1778.6	1836.8	1923.0	1910.1	1813.0	1776.4
25°	1899.3	1910.1	1810.9	1750.5	1750.5	1750.5	1795.8	1886.3	1877.7	1774.2	1737.6
27.5°	1866.9	1877.7	1767.8	1729.0	1735.4	1724.7	1761.3	1845.4	1845.4	1735.4	1696.6
30°	1830.3	1841.1	1724.7	1694.5	1698.8	1694.5	1722.5	1802.3	1802.3	1690.2	1649.2
32.5°	1787.2	1798.0	1677.2	1653.5	1662.1	1657.8	1685.9	1759.1	1761.3	1642.7	1593.2
35°	1739.7	1752.7	1627.6	1614.7	1623.3	1616.9	1636.3	1713.9	1713.9	1591.0	1528.5
37.5°	1690.2	1703.1	1575.9	1571.6	1580.2	1573.7	1588.8	1666.4	1662.1	1537.1	1459.5
40°	1636.3	1651.4	1522.0	1522.0	1532.8	1528.5	1541.4	1616.9	1608.2	1483.2	1388.3
42.5°	1575.9	1595.3	1468.1	1470.3	1457.3	1474.6	1487.5	1565.1	1547.9	1422.8	1310.7
45°	1513.4	1537.1	1416.4	1377.6	1138.3	1362.5	1431.5	1513.4	1487.5	1362.5	1235.3
47.5°	1446.6	1476.7	1356.0	1213.7	916.2	1194.3	1371.1	1448.7	1418.5	1297.8	1162.0
50°	1377.6	1412.1	1293.5	1073.6	804.1	1052.0	1304.3	1384.0	1349.5	1231.0	1077.9
52.5°	1302.1	1340.9	1233.1	950.7	728.7	931.3	1235.3	1321.5	1278.4	1159.8	1008.9
55°	1226.7	1267.6	1151.2	845.1	664.0	827.8	1155.5	1241.8	1202.9	1086.5	933.5
57.5°	1149.1	1190.0	1069.3	752.4	607.9	735.1	1065.0	1168.5	1125.3	1011.1	858.0
60°	1067.1	1108.1	980.9	668.3	545.4	655.4	972.3	1086.5	1043.4	933.5	784.7
62.5°	980.9	1021.9	896.8	590.7	493.7	579.9	871.0	1006.8	959.3	851.5	709.3
65°	892.5	922.7	797.7	517.4	441.9	508.8	780.4	907.6	873.1	765.3	638.1
67.5°	799.8	830.0	711.4	452.7	392.4	444.1	692.0	819.2	780.4	681.2	567.0
70°	702.8	728.7	620.9	390.2	344.9	383.7	599.3	720.0	685.6	592.9	491.5
72.5°	603.6	627.3	523.9	332.0	295.3	327.7	502.3	620.9	586.4	500.2	422.5
75°	498.0	521.7	433.3	273.8	245.8	269.5	413.9	515.2	482.9	411.8	351.4
77.5°	398.8	426.9	342.8	215.6	196.2	211.3	325.5	416.1	383.7	329.8	282.4
80°	304.0	327.7	254.4	163.8	150.9	161.7	237.1	316.9	291.0	254.4	219.9
82.5°	219.9	232.8	174.6	120.7	114.3	118.6	161.7	224.2	211.3	183.2	161.7
85°	148.8	146.6	107.8	84.1	81.9	84.1	97.0	135.8	133.7	122.9	103.5
87.5°	62.5	58.2	49.6	34.5	30.2	32.3	38.8	51.7	49.6	51.7	49.6
90°	2.2	21.6	34.5	43.1	45.3	43.1	34.5	21.6	2.2	23.7	38.8
92.5°	4.3	28.0	41.0	47.4	51.7	47.4	38.8	28.0	4.3	36.6	38.8
95°	12.9	38.8	47.4	58.2	62.5	58.2	47.4	36.6	12.9	32.3	58.2
97.5°	25.9	49.6	56.1	64.7	66.8	62.5	53.9	49.6	23.7	58.2	60.4
100°	38.8	62.5	73.3	73.3	75.5	73.3	71.1	60.4	36.6	64.7	73.3
102.5°	53.9	71.1	84.1	90.5	90.5	90.5	84.1	71.1	49.6	79.8	101.3
105°	69.0	77.6	92.7	101.3	105.6	101.3	92.7	79.8	66.8	92.7	107.8
107.5°	86.2	84.1	101.3	109.9	114.3	109.9	101.3	86.2	81.9	103.5	120.7
110°	103.5	92.7	109.9	118.6	120.7	118.6	109.9	92.7	99.2	116.4	133.7



TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	118.6	99.2	118.6	127.2	129.3	127.2	118.6	101.3	114.3	125.0	146.6
115°	133.7	105.6	122.9	133.7	135.8	133.7	122.9	107.8	131.5	135.8	157.4
117.5°	148.8	114.3	127.2	140.1	142.3	140.1	129.3	116.4	146.6	148.8	168.2
120°	163.8	125.0	133.7	144.4	148.8	146.6	133.7	127.2	159.5	159.5	176.8
122.5°	176.8	133.7	140.1	148.8	153.1	148.8	140.1	138.0	174.6	170.3	187.6
125°	191.9	142.3	144.4	153.1	155.2	153.1	146.6	144.4	187.6	178.9	194.0
127.5°	202.6	153.1	148.8	157.4	159.5	157.4	150.9	155.2	200.5	196.2	200.5
130°	215.6	163.8	153.1	161.7	163.8	163.8	153.1	168.2	211.3	209.1	209.1
132.5°	226.4	174.6	157.4	166.0	168.2	168.2	159.5	176.8	222.0	219.9	215.6
135°	235.0	189.7	166.0	166.0	170.3	170.3	168.2	191.9	232.8	230.7	226.4
137.5°	243.6	202.6	172.5	168.2	170.3	170.3	176.8	204.8	241.5	241.5	232.8
140°	252.2	215.6	176.8	172.5	172.5	176.8	183.2	217.7	250.1	250.1	235.0
142.5°	260.9	226.4	183.2	178.9	174.6	183.2	189.7	230.7	256.5	258.7	241.5
145°	265.2	237.1	191.9	185.4	181.1	191.9	200.5	241.5	263.0	267.3	254.4
147.5°	271.6	247.9	202.6	189.7	189.7	196.2	209.1	250.1	269.5	273.8	260.9
150°	278.1	256.5	211.3	196.2	191.9	202.6	217.7	258.7	275.9	280.3	269.5
152.5°	282.4	265.2	224.2	204.8	200.5	213.4	232.8	265.2	280.3	284.6	278.1
155°	286.7	271.6	239.3	213.4	211.3	222.0	245.8	271.6	284.6	288.9	284.6
157.5°	291.0	278.1	250.1	226.4	217.7	235.0	256.5	280.3	288.9	293.2	291.0
160°	293.2	282.4	263.0	239.3	235.0	250.1	267.3	282.4	291.0	297.5	295.3
162.5°	297.5	286.7	271.6	254.4	250.1	263.0	275.9	288.9	295.3	299.7	299.7
165°	299.7	291.0	280.3	267.3	263.0	275.9	282.4	293.2	297.5	299.7	301.8
167.5°	299.7	295.3	286.7	275.9	273.8	284.6	291.0	297.5	299.7	299.7	304.0
170°	301.8	297.5	291.0	284.6	282.4	291.0	293.2	299.7	301.8	299.7	306.1
172.5°	301.8	299.7	295.3	288.9	284.6	295.3	297.5	299.7	301.8	299.7	304.0
175°	304.0	299.7	299.7	295.3	288.9	299.7	299.7	299.7	304.0	299.7	301.8
177.5°	304.0	299.7	299.7	297.5	293.2	299.7	299.7	299.7	304.0	299.7	301.8
180°	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7



TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2013.5	2013.5	2013.5	2013.5	2013.5	2013.5
2.5°	1998.4	1983.4	1987.7	2004.9	1998.4	2028.6
5°	1983.4	1974.7	1974.7	1994.1	1992.0	2028.6
7.5°	1959.6	1951.0	1955.3	1976.9	1981.2	2026.5
10°	1931.6	1920.8	1925.1	1955.3	1966.1	2017.8
12.5°	1901.4	1892.8	1897.1	1931.6	1946.7	2009.2
15°	1866.9	1854.0	1866.9	1903.6	1923.0	1994.1
17.5°	1828.1	1810.9	1826.0	1873.4	1897.1	1976.9
20°	1789.3	1774.2	1782.9	1834.6	1869.1	1957.5
22.5°	1750.5	1729.0	1737.6	1791.5	1834.6	1929.5
25°	1705.3	1672.9	1690.2	1748.4	1798.0	1899.3
27.5°	1644.9	1595.3	1632.0	1705.3	1754.8	1866.9
30°	1565.1	1500.5	1554.3	1653.5	1709.6	1830.3
32.5°	1476.7	1407.8	1468.1	1595.3	1662.1	1787.2
35°	1388.3	1325.8	1379.7	1530.6	1612.6	1739.7
37.5°	1304.3	1250.4	1300.0	1461.6	1560.8	1690.2
40°	1224.5	1170.6	1222.4	1386.2	1504.8	1636.3
42.5°	1144.7	1095.2	1144.7	1306.4	1446.6	1575.9
45°	1065.0	987.4	1060.7	1228.8	1384.0	1513.4
47.5°	978.7	888.2	972.3	1144.7	1317.2	1446.6
50°	896.8	819.2	892.5	1067.1	1248.2	1377.6
52.5°	825.7	763.2	821.4	987.4	1177.1	1302.1
55°	758.8	709.3	758.8	909.8	1101.6	1226.7
57.5°	698.5	666.1	700.6	842.9	1024.0	1149.1
60°	646.7	627.3	648.9	761.0	946.4	1067.1
62.5°	597.2	595.0	599.3	696.3	864.5	980.9
65°	545.4	556.2	545.4	627.3	782.6	892.5
67.5°	493.7	515.2	498.0	558.4	694.2	799.8
70°	446.3	470.0	446.3	487.2	605.8	702.8
72.5°	392.4	422.5	392.4	420.4	513.1	603.6
75°	340.6	375.1	342.8	351.4	424.7	498.0
77.5°	284.6	316.9	291.0	284.6	342.8	398.8
80°	226.4	239.3	226.4	224.2	265.2	304.0
82.5°	157.4	168.2	157.4	163.8	194.0	219.9
85°	103.5	107.8	103.5	105.6	129.3	148.8
87.5°	43.1	43.1	43.1	53.9	58.2	62.5
90°	47.4	51.7	47.4	38.8	23.7	2.2
92.5°	49.6	53.9	49.6	43.1	28.0	4.3
95°	88.4	99.2	84.1	53.9	45.3	12.9
97.5°	71.1	77.6	73.3	62.5	56.1	25.9
100°	84.1	90.5	84.1	88.4	69.0	38.8
102.5°	99.2	103.5	101.3	103.5	84.1	53.9
105°	129.3	133.7	129.3	112.1	97.0	69.0
107.5°	138.0	148.8	140.1	125.0	109.9	86.2
110°	148.8	157.4	150.9	138.0	120.7	103.5



TEST NUMBER: P197411

CATALOG NUMBER: 8WSL-LD2-65-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	159.5	170.3	163.8	153.1	129.3	118.6
115°	172.5	181.1	176.8	163.8	142.3	133.7
117.5°	185.4	191.9	187.6	172.5	155.2	148.8
120°	196.2	204.8	200.5	183.2	166.0	163.8
122.5°	204.8	213.4	209.1	194.0	176.8	176.8
125°	213.4	222.0	217.7	202.6	185.4	191.9
127.5°	219.9	230.7	226.4	209.1	204.8	202.6
130°	228.5	235.0	232.8	215.6	215.6	215.6
132.5°	232.8	241.5	237.1	224.2	228.5	226.4
135°	235.0	245.8	241.5	235.0	239.3	235.0
137.5°	239.3	247.9	245.8	241.5	250.1	243.6
140°	245.8	250.1	252.2	245.8	258.7	252.2
142.5°	252.2	254.4	258.7	252.2	267.3	260.9
145°	256.5	260.9	265.2	265.2	273.8	265.2
147.5°	256.5	263.0	263.0	269.5	282.4	271.6
150°	263.0	258.7	271.6	278.1	286.7	278.1
152.5°	271.6	269.5	280.3	286.7	291.0	282.4
155°	273.8	275.9	282.4	293.2	295.3	286.7
157.5°	282.4	280.3	291.0	299.7	299.7	291.0
160°	288.9	288.9	299.7	304.0	301.8	293.2
162.5°	295.3	295.3	306.1	306.1	304.0	297.5
165°	299.7	299.7	310.4	308.3	304.0	299.7
167.5°	301.8	304.0	312.6	310.4	304.0	299.7
170°	304.0	304.0	312.6	308.3	304.0	301.8
172.5°	304.0	301.8	310.4	306.1	301.8	301.8
175°	301.8	297.5	306.1	301.8	301.8	304.0
177.5°	299.7	293.2	299.7	299.7	301.8	304.0
180°	299.7	299.7	299.7	299.7	299.7	299.7

(END OF REPORT)