

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: HALO COMMERCIAL

Report Number: P238327

Luminaire Tested: **PRS640D010-S6M24-61SWWC-3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P238327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-25)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS640D010-S6M24-61SWWC-3000K
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, WITH 6" WALL WASH DISTRIBUTION, WW TRIM SPECULAR
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2636.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.94 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

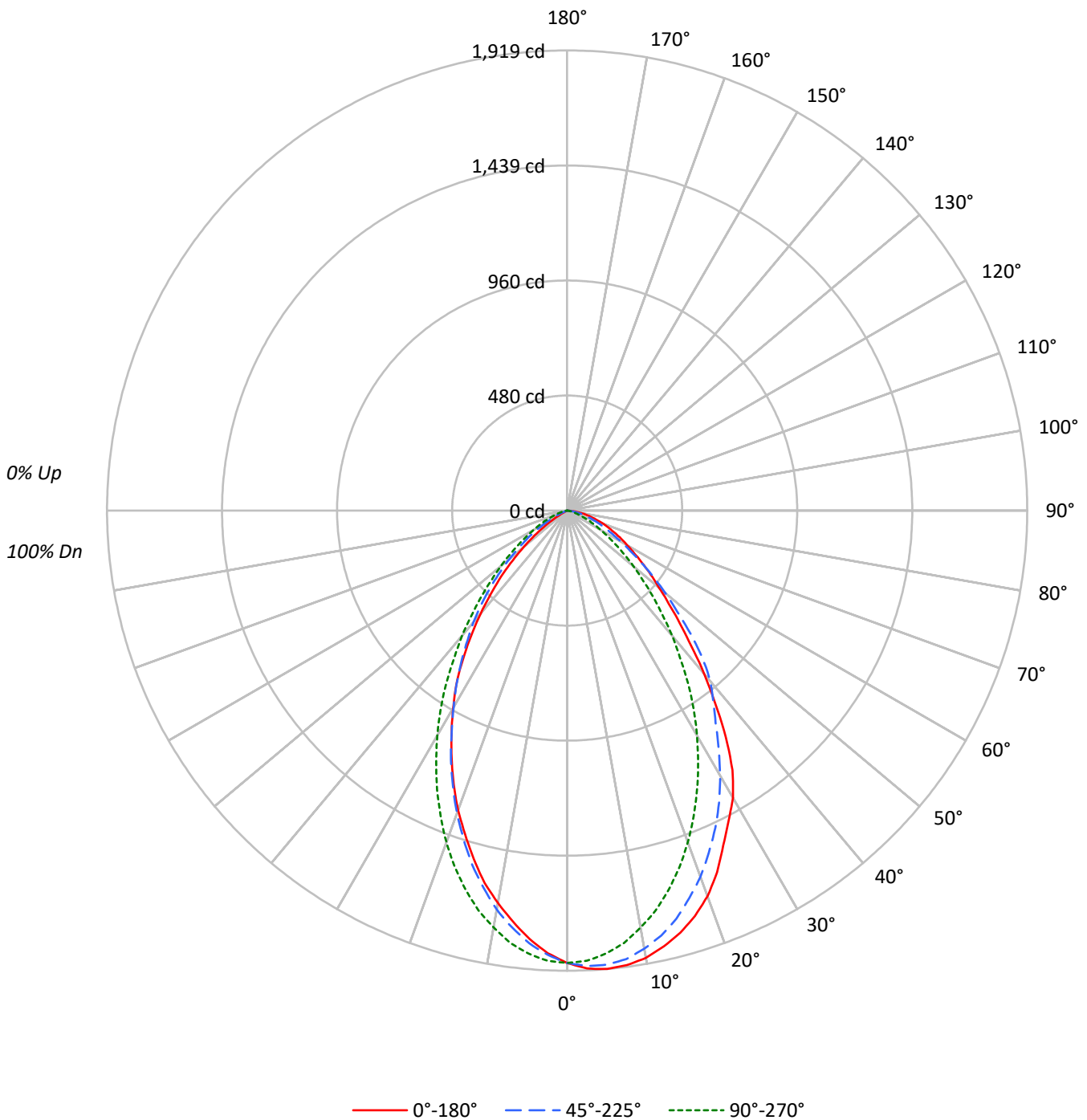
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	73	68	78	72	67	75	71	67	73	69	66	64					64			
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	60	58					58			
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52					52			
7	74	63	56	50	73	62	55	50	61	55	50	60	54	50	58	53	49	48					48			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44					44			
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40					40			
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	81233	81233	81233
5°	82931	80152	77528
10°	82797	77174	72645
15°	81233	72951	67053
20°	78424	67455	60907
25°	73165	60942	54153
30°	68748	53828	47255
35°	60666	46201	39815
40°	50006	38360	31531
45°	40467	30676	23717
50°	33511	24174	15795
55°	28697	18511	8580
60°	24921	13847	2463
65°	22209	10198	0
70°	20243	6748	0
75°	17234	4159	0
80°	15050	2653	0
85°	10572	1778	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.5	6.6
10°-20°	461.0	17.5
20°-30°	598.9	22.7
30°-40°	575.6	21.8
40°-50°	423.7	16.1
50°-60°	243.2	9.2
60°-70°	110.2	4.2
70°-80°	41.1	1.6
80°-90°	7.8	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1234.4	46.8
0°-40°	1810.0	68.7
0°-60°	2476.9	94.0
0°-90°	2636.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2636.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1887	1887	1887	1887	1887	
5°	1919	1901	1854	1812	1794	182
15°	1822	1762	1637	1529	1504	512
25°	1540	1462	1283	1147	1140	710
35°	1154	1079	879	768	758	714
45°	665	729	504	450	390	519
55°	382	375	247	200	114	346
65°	218	175	100	43	0	218
75°	104	72	25	0	0	112
85°	21	11	4	0	0	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7
2.5°	1911.7	1911.7	1911.7	1908.1	1908.1	1911.7	1908.1	1908.1	1904.5	1904.5	1901.0
5°	1918.8	1918.8	1918.8	1918.8	1915.3	1915.3	1915.3	1911.7	1908.1	1904.5	1901.0
7.5°	1911.7	1911.7	1911.7	1911.7	1908.1	1908.1	1904.5	1901.0	1897.4	1890.3	1886.7
10°	1893.8	1893.8	1893.8	1890.3	1886.7	1883.1	1883.1	1876.0	1868.8	1861.7	1854.5
12.5°	1861.7	1861.7	1858.1	1858.1	1850.9	1850.9	1847.4	1840.2	1833.1	1825.9	1815.2
15°	1822.4	1818.8	1818.8	1815.2	1808.1	1804.5	1800.9	1790.2	1779.5	1768.8	1761.6
17.5°	1772.3	1768.8	1765.2	1761.6	1750.9	1743.7	1740.2	1729.5	1718.7	1708.0	1693.7
20°	1711.6	1708.0	1704.4	1697.3	1690.1	1683.0	1675.9	1665.1	1650.8	1636.6	1625.8
22.5°	1633.0	1629.4	1625.8	1622.3	1611.5	1604.4	1600.8	1590.1	1575.8	1561.5	1543.6
25°	1540.1	1540.1	1543.6	1532.9	1525.8	1518.6	1518.6	1507.9	1493.6	1475.8	1461.5
27.5°	1457.9	1457.9	1450.7	1443.6	1432.9	1425.7	1422.2	1411.4	1404.3	1390.0	1372.1
30°	1382.8	1379.3	1372.1	1365.0	1354.3	1343.5	1332.8	1318.5	1304.2	1289.9	1275.7
32.5°	1282.8	1279.2	1279.2	1279.2	1268.5	1264.9	1257.8	1239.9	1222.1	1197.0	1175.6
35°	1154.2	1150.6	1147.0	1150.6	1157.7	1161.3	1164.9	1157.7	1139.9	1111.3	1079.1
37.5°	1014.8	1018.4	1022.0	1025.5	1036.2	1043.4	1039.8	1054.1	1050.5	1032.7	1000.5
40°	889.7	889.7	893.3	904.0	914.8	918.3	921.9	936.2	936.2	939.8	929.0
42.5°	764.7	775.4	779.0	786.1	796.8	804.0	811.1	825.4	829.0	843.3	836.1
45°	664.6	671.8	678.9	686.1	696.8	703.9	707.5	718.2	728.9	736.1	728.9
47.5°	575.3	578.9	582.4	589.6	600.3	603.9	611.0	621.7	632.5	628.9	621.7
50°	500.3	503.8	503.8	514.5	521.7	525.3	525.3	539.6	539.6	539.6	532.4
52.5°	439.5	439.5	443.1	446.7	453.8	453.8	460.9	468.1	460.9	457.4	450.2
55°	382.3	382.3	385.9	389.5	389.5	393.1	396.6	396.6	389.5	382.3	375.2
57.5°	332.3	335.9	335.9	339.5	343.0	339.5	343.0	335.9	328.7	321.6	310.9
60°	289.4	293.0	293.0	296.6	296.6	296.6	293.0	285.9	275.1	268.0	257.3
62.5°	253.7	253.7	253.7	253.7	253.7	253.7	250.1	243.0	232.3	225.1	214.4
65°	218.0	218.0	218.0	218.0	214.4	214.4	210.8	203.7	193.0	185.8	175.1
67.5°	185.8	185.8	185.8	185.8	182.2	178.7	175.1	171.5	160.8	153.6	146.5
70°	160.8	157.2	157.2	153.6	150.1	146.5	146.5	139.4	132.2	125.1	117.9
72.5°	128.6	128.6	128.6	128.6	121.5	121.5	117.9	110.8	103.6	100.1	92.9
75°	103.6	103.6	103.6	100.1	96.5	96.5	92.9	89.3	82.2	78.6	71.5
77.5°	82.2	82.2	82.2	78.6	75.0	71.5	71.5	67.9	60.7	57.2	53.6
80°	60.7	60.7	57.2	53.6	53.6	50.0	50.0	46.5	42.9	39.3	35.7
82.5°	39.3	39.3	39.3	35.7	35.7	32.2	32.2	32.2	28.6	25.0	21.4
85°	21.4	21.4	21.4	17.9	17.9	17.9	17.9	17.9	14.3	14.3	10.7
87.5°	3.6	3.6	3.6	3.6	3.6	7.1	3.6	3.6	3.6	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7
2.5°	1901.0	1897.4	1893.8	1893.8	1890.3	1890.3	1886.7	1883.1	1879.5	1879.5	1876.0
5°	1897.4	1893.8	1886.7	1883.1	1879.5	1876.0	1872.4	1865.2	1861.7	1854.5	1850.9
7.5°	1879.5	1872.4	1865.2	1858.1	1854.5	1850.9	1840.2	1833.1	1825.9	1818.8	1811.6
10°	1847.4	1840.2	1829.5	1822.4	1815.2	1808.1	1800.9	1786.6	1775.9	1765.2	1754.5
12.5°	1804.5	1793.8	1783.1	1768.8	1765.2	1758.0	1747.3	1733.0	1722.3	1708.0	1693.7
15°	1750.9	1733.0	1725.9	1708.0	1700.9	1693.7	1683.0	1668.7	1654.4	1636.6	1622.3
17.5°	1679.4	1661.6	1654.4	1636.6	1629.4	1622.3	1604.4	1590.1	1575.8	1557.9	1540.1
20°	1608.0	1593.7	1575.8	1557.9	1550.8	1543.6	1522.2	1507.9	1493.6	1472.2	1457.9
22.5°	1525.8	1507.9	1490.0	1475.8	1465.0	1457.9	1440.0	1422.2	1400.7	1379.3	1361.4
25°	1443.6	1422.2	1404.3	1386.4	1372.1	1365.0	1343.5	1322.1	1300.7	1282.8	1261.4
27.5°	1350.7	1332.8	1311.4	1286.4	1275.7	1264.9	1243.5	1218.5	1200.6	1182.7	1161.3
30°	1254.2	1236.3	1211.3	1189.9	1179.2	1168.5	1147.0	1125.6	1107.7	1082.7	1061.3
32.5°	1157.7	1139.9	1118.4	1097.0	1089.8	1075.5	1050.5	1032.7	1007.7	982.6	964.8
35°	1064.8	1050.5	1029.1	1004.1	986.2	971.9	946.9	918.3	896.9	879.0	861.2
37.5°	979.1	957.6	929.0	896.9	879.0	864.7	832.6	811.1	793.3	771.8	764.7
40°	889.7	854.0	821.8	789.7	775.4	757.5	732.5	711.1	696.8	682.5	664.6
42.5°	804.0	757.5	721.8	693.2	675.3	664.6	636.0	621.7	603.9	586.0	578.9
45°	707.5	671.8	628.9	600.3	586.0	575.3	550.3	532.4	514.5	503.8	493.1
47.5°	611.0	582.4	543.1	511.0	500.3	489.5	471.7	450.2	435.9	425.2	414.5
50°	514.5	493.1	471.7	435.9	425.2	421.6	400.2	382.3	368.0	360.9	350.2
52.5°	435.9	418.1	396.6	371.6	360.9	350.2	335.9	318.0	310.9	300.2	293.0
55°	360.9	343.0	332.3	314.4	300.2	293.0	278.7	268.0	257.3	246.6	239.4
57.5°	296.6	285.9	275.1	260.8	253.7	246.6	232.3	221.5	210.8	200.1	193.0
60°	246.6	235.8	225.1	214.4	207.2	203.7	189.4	178.7	167.9	160.8	153.6
62.5°	203.7	196.5	185.8	175.1	167.9	164.4	153.6	142.9	132.2	128.6	121.5
65°	167.9	160.8	150.1	139.4	139.4	132.2	121.5	114.3	107.2	100.1	92.9
67.5°	139.4	128.6	121.5	114.3	107.2	103.6	96.5	89.3	82.2	75.0	71.5
70°	110.8	103.6	96.5	85.8	82.2	78.6	71.5	64.3	60.7	53.6	50.0
72.5°	85.8	78.6	71.5	64.3	60.7	57.2	53.6	46.5	42.9	39.3	35.7
75°	67.9	60.7	53.6	46.5	46.5	42.9	39.3	32.2	28.6	25.0	25.0
77.5°	46.5	42.9	39.3	32.2	32.2	28.6	25.0	21.4	21.4	17.9	14.3
80°	32.2	28.6	25.0	21.4	17.9	17.9	14.3	14.3	10.7	10.7	7.1
82.5°	21.4	17.9	14.3	10.7	10.7	10.7	7.1	7.1	7.1	3.6	3.6
85°	10.7	7.1	7.1	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
87.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7
2.5°	1872.4	1868.8	1865.2	1865.2	1865.2	1861.7	1858.1	1854.5	1854.5	1850.9	1850.9
5°	1843.8	1836.7	1833.1	1829.5	1829.5	1822.4	1818.8	1815.2	1811.6	1808.1	1804.5
7.5°	1800.9	1793.8	1786.6	1779.5	1779.5	1772.3	1765.2	1761.6	1754.5	1750.9	1747.3
10°	1747.3	1740.2	1729.5	1722.3	1715.2	1711.6	1700.9	1693.7	1690.1	1679.4	1675.9
12.5°	1679.4	1668.7	1658.0	1650.8	1647.3	1636.6	1625.8	1622.3	1611.5	1604.4	1600.8
15°	1608.0	1593.7	1579.4	1575.8	1568.7	1557.9	1547.2	1536.5	1529.4	1518.6	1518.6
17.5°	1525.8	1507.9	1497.2	1486.5	1482.9	1468.6	1454.3	1447.2	1436.4	1429.3	1425.7
20°	1436.4	1418.6	1404.3	1397.1	1386.4	1375.7	1361.4	1354.3	1343.5	1336.4	1332.8
22.5°	1340.0	1318.5	1304.2	1297.1	1289.9	1272.1	1261.4	1254.2	1243.5	1236.3	1232.8
25°	1239.9	1225.6	1207.8	1197.0	1189.9	1172.0	1161.3	1154.2	1147.0	1139.9	1136.3
27.5°	1139.9	1118.4	1100.6	1093.4	1086.3	1075.5	1057.7	1047.0	1043.4	1039.8	1036.2
30°	1039.8	1022.0	1004.1	993.4	982.6	971.9	961.2	950.5	946.9	939.8	932.6
32.5°	946.9	929.0	911.2	904.0	896.9	879.0	868.3	861.2	857.6	843.3	839.7
35°	850.4	836.1	825.4	818.3	814.7	800.4	793.3	775.4	768.2	761.1	757.5
37.5°	750.4	736.1	725.4	725.4	718.2	711.1	703.9	696.8	682.5	678.9	675.3
40°	653.9	643.2	636.0	628.9	628.9	625.3	618.2	618.2	607.5	600.3	589.6
42.5°	564.6	557.4	550.3	550.3	546.7	543.1	536.0	536.0	528.8	521.7	511.0
45°	482.4	471.7	468.1	468.1	464.5	460.9	457.4	457.4	450.2	443.1	435.9
47.5°	407.4	400.2	396.6	393.1	389.5	389.5	385.9	382.3	378.8	371.6	364.5
50°	343.0	335.9	332.3	328.7	328.7	325.2	321.6	314.4	314.4	303.7	296.6
52.5°	285.9	282.3	275.1	271.6	268.0	264.4	260.8	257.3	250.1	243.0	239.4
55°	232.3	225.1	221.5	218.0	214.4	210.8	207.2	203.7	200.1	189.4	182.2
57.5°	185.8	178.7	175.1	175.1	171.5	164.4	160.8	157.2	150.1	142.9	132.2
60°	146.5	142.9	135.8	135.8	132.2	125.1	121.5	114.3	107.2	96.5	89.3
62.5°	114.3	110.8	103.6	100.1	100.1	92.9	85.8	78.6	71.5	64.3	53.6
65°	85.8	82.2	78.6	75.0	71.5	64.3	57.2	50.0	42.9	32.2	21.4
67.5°	64.3	60.7	53.6	53.6	50.0	42.9	35.7	28.6	17.9	10.7	3.6
70°	46.5	42.9	35.7	32.2	32.2	25.0	17.9	10.7	0.0	0.0	0.0
72.5°	32.2	28.6	21.4	17.9	17.9	10.7	3.6	0.0	0.0	0.0	0.0
75°	21.4	17.9	10.7	10.7	7.1	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	10.7	7.1	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.6	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P238327

CATALOG NUMBER: PRS640D010-S6M24-61SWWC-3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7	1886.7
2.5°	1850.9	1847.4	1847.4	1847.4	1843.8	1847.4	1847.4	1847.4
5°	1800.9	1800.9	1797.3	1797.3	1797.3	1793.8	1793.8	1793.8
7.5°	1740.2	1740.2	1736.6	1736.6	1736.6	1733.0	1729.5	1729.5
10°	1672.3	1672.3	1668.7	1668.7	1668.7	1665.1	1661.6	1661.6
12.5°	1593.7	1593.7	1593.7	1590.1	1590.1	1590.1	1586.5	1590.1
15°	1515.1	1511.5	1511.5	1507.9	1504.3	1504.3	1504.3	1504.3
17.5°	1422.2	1418.6	1418.6	1415.0	1418.6	1415.0	1415.0	1415.0
20°	1325.7	1325.7	1325.7	1325.7	1325.7	1325.7	1329.3	1329.3
22.5°	1232.8	1229.2	1232.8	1229.2	1229.2	1232.8	1232.8	1236.3
25°	1136.3	1132.7	1132.7	1136.3	1136.3	1136.3	1139.9	1139.9
27.5°	1029.1	1036.2	1036.2	1039.8	1039.8	1043.4	1047.0	1043.4
30°	936.2	936.2	936.2	939.8	943.3	946.9	950.5	950.5
32.5°	836.1	839.7	843.3	839.7	843.3	850.4	857.6	861.2
35°	754.0	746.8	743.2	743.2	746.8	750.4	754.0	757.5
37.5°	664.6	661.1	657.5	650.3	653.9	657.5	657.5	657.5
40°	582.4	575.3	571.7	568.1	564.6	561.0	561.0	561.0
42.5°	503.8	496.7	489.5	489.5	478.8	475.2	475.2	471.7
45°	428.8	421.6	414.5	414.5	403.8	393.1	389.5	389.5
47.5°	357.3	346.6	343.0	339.5	328.7	318.0	310.9	307.3
50°	289.4	278.7	275.1	271.6	260.8	246.6	239.4	235.8
52.5°	228.7	218.0	210.8	207.2	193.0	182.2	175.1	171.5
55°	171.5	164.4	157.2	153.6	139.4	125.1	114.3	114.3
57.5°	125.1	110.8	107.2	103.6	89.3	78.6	67.9	64.3
60°	82.2	67.9	64.3	60.7	46.5	35.7	32.2	28.6
62.5°	42.9	32.2	28.6	25.0	17.9	10.7	7.1	7.1
65°	14.3	3.6	3.6	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)