

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: P238367

Luminaire Tested: **PRS640D010-S6M24-61SWWMW-4000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P238367
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-27)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS640D010-S6M24-61SWWMW-4000K
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, WITH 6" WALL WASH DISTRIBUTION, WW TRIM MATTE WHITE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2782.4 lumens
Efficiency: N/A
Efficacy: 73.2 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.04 / 1.14
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

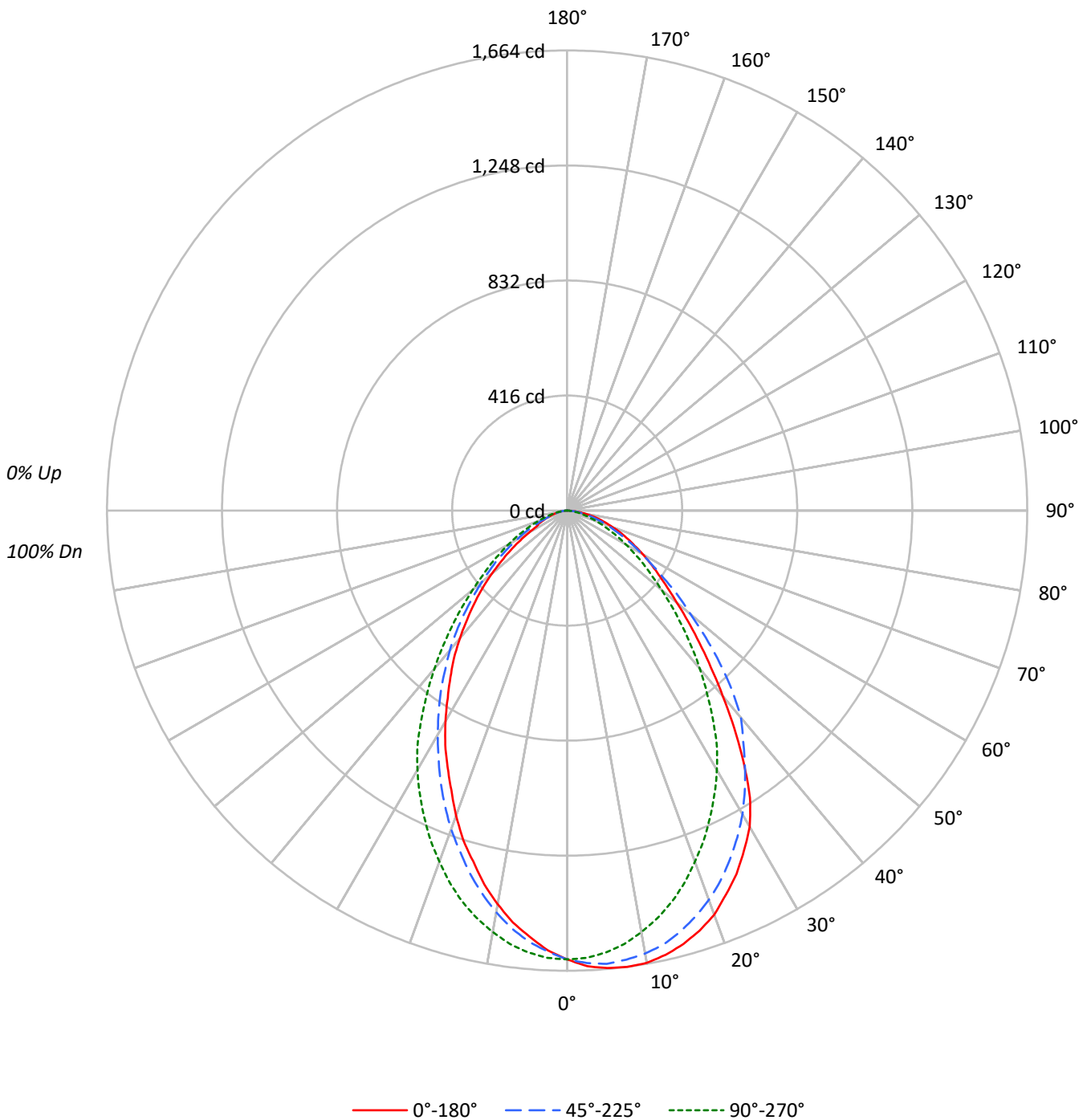
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90					88				
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79					77				
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70					68				
4	88	78	70	65	86	77	70	64	74	68	63	72	67	63	70	66	62					60				
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55					53				
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50					48				
7	71	59	52	46	70	59	51	46	57	51	46	56	50	45	55	49	45					43				
8	67	55	47	42	66	54	47	42	53	46	42	52	46	41	51	45	41					39				
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38					36				
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35					33				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69866	69866	69866
5°	71767	69321	66875
10°	72597	67648	63193
15°	72331	65266	58540
20°	71239	61901	53778
25°	68842	58086	48585
30°	65665	53848	43716
35°	58516	48199	38680
40°	49208	41997	33937
45°	41131	35615	28953
50°	34630	29827	23759
55°	30311	25214	18699
60°	27297	21123	13649
65°	24604	17299	11533
70°	21854	14250	9983
75°	20096	11295	8784
80°	16836	8430	7488
85°	13042	5582	5582



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.4	5.4
10°-20°	412.0	14.8
20°-30°	566.1	20.3
30°-40°	586.6	21.1
40°-50°	473.2	17.0
50°-60°	314.2	11.3
60°-70°	177.5	6.4
70°-80°	81.5	2.9
80°-90°	19.8	0.7
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°	1129.6	40.6
0°-40°	1716.1	61.7
0°-60°	2503.6	90.0
0°-90°	2782.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2782.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1623	1623	1623	1623	1623	
5°	1660	1645	1604	1566	1547	158
15°	1623	1578	1464	1359	1313	457
25°	1449	1392	1223	1083	1023	665
35°	1113	1121	917	796	736	691
45°	676	781	585	525	476	526
55°	404	426	336	302	249	365
65°	242	223	170	136	113	240
75°	121	98	68	49	53	127
85°	26	19	11	15	11	31
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°	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7
2.5°	1649.2	1645.4	1645.4	1645.4	1645.4	1645.4	1645.4	1645.4	1641.6	1641.6	1637.8
5°	1660.5	1660.5	1660.5	1660.5	1656.7	1656.7	1656.7	1652.9	1649.2	1645.4	1645.4
7.5°	1664.3	1664.3	1664.3	1660.5	1660.5	1660.5	1656.7	1652.9	1649.2	1645.4	1637.8
10°	1660.5	1660.5	1656.7	1656.7	1652.9	1649.2	1649.2	1645.4	1641.6	1634.1	1626.5
12.5°	1645.4	1645.4	1645.4	1641.6	1637.8	1637.8	1634.1	1626.5	1622.7	1615.2	1607.6
15°	1622.7	1622.7	1622.7	1619.0	1615.2	1611.4	1611.4	1603.9	1596.3	1588.8	1577.5
17.5°	1592.5	1592.5	1592.5	1588.8	1581.2	1581.2	1577.5	1569.9	1562.4	1554.8	1539.7
20°	1554.8	1551.0	1551.0	1547.3	1539.7	1539.7	1535.9	1528.4	1520.8	1509.5	1498.2
22.5°	1502.0	1505.8	1502.0	1498.2	1494.4	1490.7	1486.9	1479.3	1471.8	1460.5	1449.1
25°	1449.1	1445.4	1445.4	1445.4	1441.6	1434.0	1430.3	1426.5	1415.2	1403.9	1392.5
27.5°	1385.0	1377.4	1377.4	1381.2	1377.4	1373.7	1369.9	1362.3	1354.8	1343.5	1332.2
30°	1320.8	1317.1	1317.1	1313.3	1305.7	1302.0	1302.0	1294.4	1290.6	1279.3	1268.0
32.5°	1230.3	1234.0	1237.8	1241.6	1237.8	1237.8	1237.8	1226.5	1215.2	1207.6	1196.3
35°	1113.3	1117.0	1124.6	1132.1	1147.2	1151.0	1154.8	1158.6	1147.2	1135.9	1120.8
37.5°	992.5	1000.1	1003.8	1015.2	1026.5	1037.8	1041.6	1056.7	1068.0	1064.2	1045.3
40°	875.5	879.3	890.6	894.4	913.3	924.6	932.1	947.2	969.9	977.4	977.4
42.5°	769.9	773.6	777.4	788.7	803.8	818.9	822.7	837.8	864.2	875.5	883.1
45°	675.5	679.3	686.8	690.6	705.7	713.3	720.8	743.4	758.5	777.4	781.2
47.5°	592.5	592.5	596.3	607.6	618.9	626.5	630.2	649.1	664.2	675.5	679.3
50°	517.0	520.8	524.6	528.3	535.9	543.4	551.0	566.1	577.4	584.9	581.2
52.5°	456.6	460.4	460.4	464.2	471.7	479.3	483.0	490.6	498.1	501.9	505.7
55°	403.8	403.8	407.6	411.3	415.1	418.9	418.9	426.4	426.4	430.2	426.4
57.5°	358.5	358.5	358.5	362.3	362.3	366.1	366.1	366.1	366.1	366.1	362.3
60°	317.0	313.2	317.0	317.0	320.8	320.8	320.8	317.0	313.2	313.2	309.5
62.5°	275.5	275.5	275.5	279.3	279.3	275.5	275.5	275.5	267.9	267.9	264.2
65°	241.5	237.8	241.5	241.5	241.5	237.8	237.8	234.0	230.2	226.4	222.7
67.5°	207.6	207.6	207.6	207.6	203.8	203.8	203.8	196.2	192.5	188.7	184.9
70°	173.6	177.4	173.6	173.6	173.6	169.8	169.8	166.0	162.3	158.5	154.7
72.5°	147.2	147.2	147.2	143.4	143.4	139.6	139.6	135.9	132.1	128.3	124.5
75°	120.8	120.8	120.8	117.0	113.2	113.2	113.2	109.4	105.7	101.9	98.1
77.5°	94.3	94.3	90.6	90.6	86.8	86.8	86.8	83.0	79.3	75.5	75.5
80°	67.9	67.9	67.9	67.9	64.2	64.2	64.2	60.4	56.6	56.6	52.8
82.5°	45.3	49.1	45.3	45.3	41.5	41.5	41.5	41.5	37.7	37.7	37.7
85°	26.4	26.4	26.4	26.4	22.6	26.4	22.6	22.6	22.6	22.6	18.9
87.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
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°	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7
2.5°	1637.8	1634.1	1634.1	1630.3	1630.3	1626.5	1626.5	1622.7	1622.7	1619.0	1615.2
5°	1637.8	1634.1	1630.3	1630.3	1626.5	1622.7	1619.0	1615.2	1607.6	1603.9	1600.1
7.5°	1634.1	1630.3	1622.7	1615.2	1611.4	1607.6	1603.9	1596.3	1588.8	1581.2	1573.7
10°	1622.7	1615.2	1603.9	1596.3	1592.5	1585.0	1577.5	1569.9	1558.6	1547.3	1539.7
12.5°	1600.1	1588.8	1577.5	1566.1	1562.4	1554.8	1543.5	1532.2	1520.8	1509.5	1498.2
15°	1566.1	1554.8	1543.5	1532.2	1524.6	1520.8	1505.8	1490.7	1479.3	1464.2	1449.1
17.5°	1528.4	1517.1	1502.0	1486.9	1479.3	1471.8	1460.5	1441.6	1430.3	1411.4	1400.1
20°	1486.9	1471.8	1452.9	1437.8	1430.3	1422.7	1403.9	1388.8	1369.9	1351.0	1339.7
22.5°	1434.0	1415.2	1400.1	1385.0	1373.7	1366.1	1347.3	1328.4	1309.5	1290.6	1271.8
25°	1373.7	1358.6	1339.7	1324.6	1313.3	1302.0	1283.1	1264.2	1241.6	1222.7	1203.8
27.5°	1317.1	1298.2	1279.3	1256.7	1249.1	1234.0	1215.2	1196.3	1173.7	1154.8	1132.1
30°	1249.1	1230.3	1207.6	1188.8	1181.2	1169.9	1147.2	1124.6	1105.7	1083.1	1064.2
32.5°	1181.2	1162.3	1143.5	1120.8	1109.5	1094.4	1071.8	1049.1	1026.5	1007.6	985.0
35°	1109.5	1090.6	1068.0	1045.3	1030.3	1015.2	988.7	962.3	939.7	917.0	905.7
37.5°	1034.0	1011.4	988.7	954.8	939.7	924.6	898.2	875.5	852.9	830.2	818.9
40°	951.0	924.6	898.2	868.0	852.9	834.0	811.4	788.7	766.1	747.2	732.1
42.5°	868.0	834.0	807.6	773.6	762.3	747.2	724.6	698.2	679.3	664.2	649.1
45°	773.6	751.0	720.8	690.6	675.5	664.2	641.5	618.9	600.0	584.9	573.6
47.5°	675.5	664.2	634.0	603.8	596.3	581.2	558.5	539.7	524.6	513.2	501.9
50°	584.9	577.4	558.5	528.3	517.0	505.7	486.8	471.7	456.6	445.3	437.8
52.5°	501.9	494.4	483.0	460.4	449.1	437.8	422.7	407.6	396.3	384.9	381.2
55°	426.4	418.9	407.6	392.5	384.9	373.6	362.3	351.0	339.6	335.9	328.3
57.5°	362.3	351.0	343.4	332.1	328.3	320.8	309.5	301.9	294.4	286.8	279.3
60°	305.7	298.1	290.6	283.0	279.3	275.5	264.2	256.6	249.1	245.3	237.8
62.5°	260.4	252.8	245.3	237.8	234.0	230.2	222.7	215.1	207.6	207.6	200.0
65°	218.9	211.3	207.6	200.0	196.2	192.5	184.9	181.1	173.6	169.8	166.0
67.5°	181.1	177.4	173.6	162.3	162.3	158.5	151.0	147.2	143.4	139.6	135.9
70°	147.2	143.4	139.6	135.9	132.1	128.3	124.5	120.8	113.2	113.2	109.4
72.5°	120.8	117.0	109.4	105.7	105.7	101.9	98.1	94.3	90.6	86.8	86.8
75°	94.3	90.6	86.8	83.0	79.3	79.3	75.5	71.7	71.7	67.9	64.2
77.5°	71.7	67.9	64.2	60.4	60.4	56.6	56.6	52.8	52.8	49.1	49.1
80°	49.1	49.1	45.3	45.3	41.5	41.5	37.7	37.7	37.7	34.0	34.0
82.5°	34.0	30.2	30.2	30.2	26.4	26.4	26.4	26.4	22.6	22.6	22.6
85°	18.9	18.9	15.1	15.1	15.1	15.1	15.1	15.1	15.1	11.3	11.3
87.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
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°	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7
2.5°	1615.2	1611.4	1607.6	1607.6	1607.6	1603.9	1603.9	1600.1	1596.3	1596.3	1592.5
5°	1592.5	1588.8	1585.0	1581.2	1581.2	1573.7	1573.7	1569.9	1566.1	1562.4	1558.6
7.5°	1566.1	1558.6	1554.8	1547.3	1547.3	1543.5	1532.2	1528.4	1524.6	1517.1	1513.3
10°	1532.2	1520.8	1513.3	1509.5	1502.0	1498.2	1486.9	1483.1	1475.6	1471.8	1464.2
12.5°	1486.9	1475.6	1464.2	1460.5	1456.7	1445.4	1437.8	1426.5	1419.0	1411.4	1403.9
15°	1437.8	1426.5	1411.4	1407.6	1403.9	1388.8	1377.4	1369.9	1358.6	1351.0	1343.5
17.5°	1381.2	1366.1	1351.0	1347.3	1339.7	1324.6	1317.1	1305.7	1290.6	1283.1	1275.5
20°	1320.8	1305.7	1290.6	1286.9	1279.3	1264.2	1249.1	1237.8	1226.5	1218.9	1207.6
22.5°	1252.9	1237.8	1218.9	1211.4	1207.6	1188.8	1177.4	1166.1	1154.8	1139.7	1132.1
25°	1188.8	1169.9	1154.8	1143.5	1135.9	1120.8	1109.5	1090.6	1083.1	1068.0	1060.4
27.5°	1117.0	1098.2	1083.1	1071.8	1064.2	1052.9	1034.0	1018.9	1007.6	996.3	988.7
30°	1045.3	1026.5	1011.4	1000.1	992.5	977.4	958.5	951.0	935.9	924.6	913.3
32.5°	969.9	951.0	932.1	928.4	917.0	901.9	890.6	875.5	864.2	852.9	841.6
35°	883.1	871.8	856.7	852.9	845.3	830.2	818.9	807.6	796.3	781.2	769.9
37.5°	800.0	785.0	777.4	769.9	766.1	758.5	747.2	735.9	724.6	713.3	709.5
40°	717.0	705.7	694.4	694.4	690.6	683.1	675.5	668.0	660.4	649.1	641.5
42.5°	637.8	626.5	622.7	615.1	611.4	607.6	600.0	596.3	592.5	584.9	577.4
45°	562.3	554.8	547.2	543.4	539.7	535.9	535.9	528.3	524.6	520.8	513.2
47.5°	490.6	486.8	483.0	479.3	475.5	475.5	468.0	464.2	460.4	460.4	452.9
50°	430.2	426.4	422.7	418.9	415.1	415.1	411.3	407.6	403.8	400.0	392.5
52.5°	377.4	373.6	366.1	366.1	366.1	362.3	358.5	354.7	351.0	347.2	343.4
55°	324.5	320.8	317.0	317.0	313.2	313.2	309.5	305.7	301.9	298.1	294.4
57.5°	279.3	275.5	271.7	271.7	267.9	267.9	264.2	260.4	252.8	249.1	245.3
60°	237.8	234.0	230.2	230.2	226.4	222.7	222.7	215.1	211.3	207.6	200.0
62.5°	196.2	192.5	192.5	188.7	188.7	188.7	184.9	177.4	173.6	166.0	162.3
65°	162.3	158.5	158.5	154.7	154.7	151.0	147.2	143.4	135.9	132.1	124.5
67.5°	132.1	132.1	128.3	124.5	124.5	120.8	117.0	109.4	105.7	98.1	94.3
70°	105.7	101.9	101.9	98.1	94.3	90.6	86.8	83.0	79.3	79.3	79.3
72.5°	83.0	79.3	79.3	75.5	75.5	67.9	64.2	64.2	64.2	64.2	64.2
75°	64.2	60.4	56.6	56.6	52.8	52.8	49.1	49.1	49.1	49.1	52.8
77.5°	45.3	45.3	41.5	41.5	37.7	37.7	37.7	37.7	37.7	37.7	41.5
80°	34.0	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2
82.5°	22.6	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	22.6
85°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	15.1	11.3	11.3
87.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
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: P238367

CATALOG NUMBER: PRS640D010-S6M24-61SWWMW-4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7	1622.7
2.5°	1592.5	1592.5	1592.5	1592.5	1592.5	1588.8	1592.5	1592.5
5°	1558.6	1554.8	1554.8	1551.0	1551.0	1551.0	1551.0	1547.3
7.5°	1509.5	1505.8	1505.8	1505.8	1502.0	1502.0	1498.2	1502.0
10°	1456.7	1452.9	1449.1	1452.9	1445.4	1445.4	1445.4	1445.4
12.5°	1400.1	1396.3	1392.5	1388.8	1388.8	1385.0	1385.0	1385.0
15°	1335.9	1332.2	1328.4	1324.6	1324.6	1317.1	1317.1	1313.3
17.5°	1268.0	1264.2	1260.5	1256.7	1249.1	1249.1	1245.4	1249.1
20°	1196.3	1188.8	1185.0	1185.0	1181.2	1177.4	1173.7	1173.7
22.5°	1124.6	1117.0	1117.0	1109.5	1105.7	1102.0	1098.2	1094.4
25°	1049.1	1041.6	1041.6	1034.0	1030.3	1026.5	1026.5	1022.7
27.5°	977.4	966.1	966.1	962.3	954.8	951.0	951.0	954.8
30°	905.7	898.2	894.4	886.8	883.1	879.3	875.5	879.3
32.5°	834.0	822.7	818.9	818.9	815.1	811.4	807.6	803.8
35°	762.3	758.5	751.0	747.2	739.7	739.7	735.9	735.9
37.5°	698.2	686.8	683.1	679.3	675.5	671.7	668.0	671.7
40°	630.2	622.7	615.1	615.1	607.6	603.8	600.0	603.8
42.5°	569.8	562.3	558.5	551.0	543.4	539.7	539.7	535.9
45°	509.5	498.1	498.1	486.8	483.0	479.3	475.5	475.5
47.5°	449.1	441.5	434.0	434.0	422.7	418.9	415.1	415.1
50°	392.5	381.2	377.4	373.6	366.1	358.5	354.7	354.7
52.5°	335.9	328.3	320.8	320.8	313.2	305.7	301.9	298.1
55°	286.8	279.3	275.5	267.9	264.2	252.8	249.1	249.1
57.5°	237.8	230.2	226.4	222.7	215.1	207.6	200.0	200.0
60°	196.2	188.7	188.7	181.1	173.6	166.0	158.5	158.5
62.5°	154.7	147.2	147.2	143.4	135.9	132.1	128.3	124.5
65°	120.8	113.2	113.2	113.2	113.2	113.2	109.4	113.2
67.5°	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3
70°	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
72.5°	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2
75°	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8
77.5°	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
80°	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2
82.5°	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
85°	11.3	15.1	15.1	15.1	15.1	15.1	11.3	11.3
87.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)