

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: P238357

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P238357
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-3000K
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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2632.4 lumens
Efficiency: N/A
Efficacy: 69.3 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

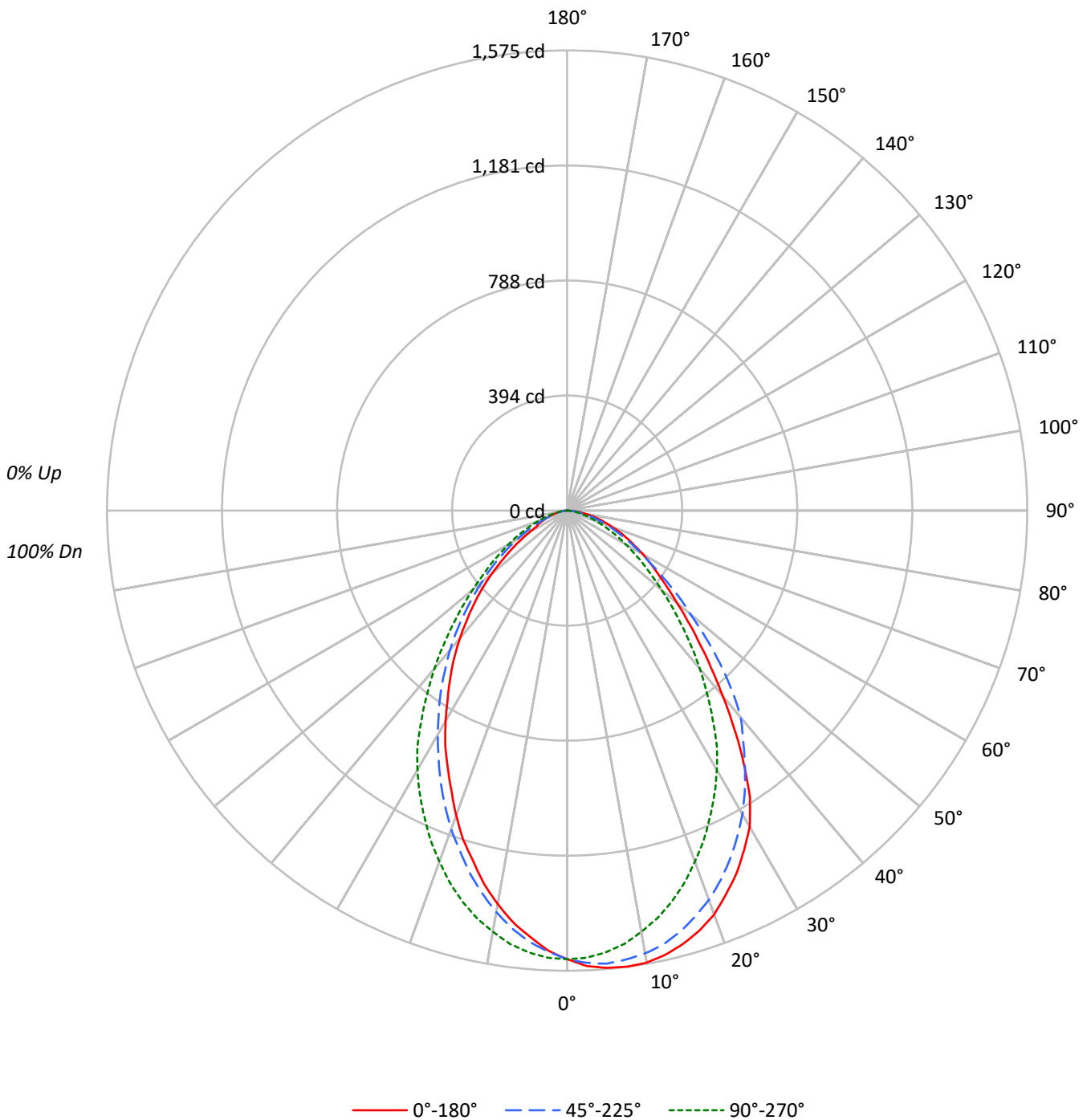
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	66103	66103	66103
5°	67899	65587	63270
10°	68684	64002	59787
15°	68435	61749	55384
20°	67400	58566	50877
25°	65136	54956	45967
30°	62131	50944	41359
35°	55363	45602	36593
40°	46560	39737	32110
45°	38915	33696	27394
50°	32768	28220	22479
55°	28675	23856	17693
60°	25825	19986	12917
65°	23279	16372	10911
70°	20671	13482	9441
75°	19014	10697	8318
80°	15943	7959	7091
85°	12350	5286	5286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.3	5.4
10°-20°	389.8	14.8
20°-30°	535.6	20.3
30°-40°	555.0	21.1
40°-50°	447.7	17.0
50°-60°	297.3	11.3
60°-70°	167.9	6.4
70°-80°	77.1	2.9
80°-90°	18.7	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°	1068.7	40.6
0°-40°	1623.7	61.7
0°-60°	2368.7	90.0
0°-90°	2632.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2632.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1535	1535	1535	1535	1535	
5°	1571	1557	1518	1482	1464	150
15°	1535	1492	1385	1285	1242	432
25°	1371	1318	1157	1025	968	629
35°	1053	1060	868	753	696	654
45°	639	739	553	496	450	497
55°	382	404	318	286	236	346
65°	228	211	161	128	107	227
75°	114	93	64	46	50	120
85°	25	18	11	14	11	29
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°	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3
2.5°	1560.3	1556.7	1556.7	1556.7	1556.7	1556.7	1556.7	1556.7	1553.2	1553.2	1549.6
5°	1571.0	1571.0	1571.0	1571.0	1567.4	1567.4	1567.4	1563.9	1560.3	1556.7	1556.7
7.5°	1574.6	1574.6	1574.6	1571.0	1571.0	1571.0	1567.4	1563.9	1560.3	1556.7	1549.6
10°	1571.0	1571.0	1567.4	1567.4	1563.9	1560.3	1560.3	1556.7	1553.2	1546.0	1538.9
12.5°	1556.7	1556.7	1556.7	1553.2	1549.6	1549.6	1546.0	1538.9	1535.3	1528.2	1521.0
15°	1535.3	1535.3	1535.3	1531.7	1528.2	1524.6	1524.6	1517.5	1510.3	1503.2	1492.5
17.5°	1506.7	1506.7	1506.7	1503.2	1496.0	1496.0	1492.5	1485.3	1478.2	1471.0	1456.8
20°	1471.0	1467.5	1467.5	1463.9	1456.8	1456.8	1453.2	1446.0	1438.9	1428.2	1417.5
22.5°	1421.0	1424.6	1421.0	1417.5	1413.9	1410.3	1406.8	1399.6	1392.5	1381.8	1371.1
25°	1371.1	1367.5	1367.5	1367.5	1363.9	1356.8	1353.2	1349.6	1338.9	1328.2	1317.5
27.5°	1310.4	1303.2	1303.2	1306.8	1303.2	1299.7	1296.1	1288.9	1281.8	1271.1	1260.4
30°	1249.7	1246.1	1246.1	1242.5	1235.4	1231.8	1231.8	1224.7	1221.1	1210.4	1199.7
32.5°	1164.0	1167.5	1171.1	1174.7	1171.1	1171.1	1171.1	1160.4	1149.7	1142.6	1131.8
35°	1053.3	1056.9	1064.0	1071.1	1085.4	1089.0	1092.6	1096.1	1085.4	1074.7	1060.4
37.5°	939.0	946.2	949.7	960.5	971.2	981.9	985.5	999.7	1010.4	1006.9	989.0
40°	828.4	831.9	842.6	846.2	864.1	874.8	881.9	896.2	917.6	924.8	924.8
42.5°	728.4	731.9	735.5	746.2	760.5	774.8	778.4	792.6	817.6	828.4	835.5
45°	639.1	642.7	649.8	653.4	667.7	674.8	682.0	703.4	717.7	735.5	739.1
47.5°	560.6	560.6	564.1	574.8	585.6	592.7	596.3	614.1	628.4	639.1	642.7
50°	489.2	492.7	496.3	499.9	507.0	514.1	521.3	535.6	546.3	553.4	549.9
52.5°	432.0	435.6	435.6	439.2	446.3	453.5	457.0	464.2	471.3	474.9	478.4
55°	382.0	382.0	385.6	389.2	392.8	396.3	396.3	403.5	403.5	407.0	403.5
57.5°	339.2	339.2	339.2	342.8	342.8	346.3	346.3	346.3	346.3	346.3	342.8
60°	299.9	296.3	299.9	299.9	303.5	303.5	303.5	299.9	296.3	296.3	292.8
62.5°	260.6	260.6	260.6	264.2	264.2	260.6	260.6	260.6	253.5	253.5	249.9
65°	228.5	224.9	228.5	228.5	228.5	224.9	224.9	221.4	217.8	214.2	210.7
67.5°	196.4	196.4	196.4	196.4	192.8	192.8	192.8	185.7	182.1	178.5	175.0
70°	164.2	167.8	164.2	164.2	164.2	160.7	160.7	157.1	153.5	150.0	146.4
72.5°	139.2	139.2	139.2	135.7	135.7	132.1	132.1	128.5	125.0	121.4	117.8
75°	114.3	114.3	114.3	110.7	107.1	107.1	107.1	103.5	100.0	96.4	92.8
77.5°	89.3	89.3	85.7	85.7	82.1	82.1	82.1	78.6	75.0	71.4	71.4
80°	64.3	64.3	64.3	64.3	60.7	60.7	60.7	57.1	53.6	53.6	50.0
82.5°	42.8	46.4	42.8	42.8	39.3	39.3	39.3	39.3	35.7	35.7	35.7
85°	25.0	25.0	25.0	25.0	21.4	25.0	21.4	21.4	21.4	21.4	17.9
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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°	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3
2.5°	1549.6	1546.0	1546.0	1542.4	1542.4	1538.9	1538.9	1535.3	1535.3	1531.7	1528.2
5°	1549.6	1546.0	1542.4	1542.4	1538.9	1535.3	1531.7	1528.2	1521.0	1517.5	1513.9
7.5°	1546.0	1542.4	1535.3	1528.2	1524.6	1521.0	1517.5	1510.3	1503.2	1496.0	1488.9
10°	1535.3	1528.2	1517.5	1510.3	1506.7	1499.6	1492.5	1485.3	1474.6	1463.9	1456.8
12.5°	1513.9	1503.2	1492.5	1481.7	1478.2	1471.0	1460.3	1449.6	1438.9	1428.2	1417.5
15°	1481.7	1471.0	1460.3	1449.6	1442.5	1438.9	1424.6	1410.3	1399.6	1385.3	1371.1
17.5°	1446.0	1435.3	1421.0	1406.8	1399.6	1392.5	1381.8	1363.9	1353.2	1335.4	1324.6
20°	1406.8	1392.5	1374.6	1360.4	1353.2	1346.1	1328.2	1313.9	1296.1	1278.2	1267.5
22.5°	1356.8	1338.9	1324.6	1310.4	1299.7	1292.5	1274.7	1256.8	1239.0	1221.1	1203.3
25°	1299.7	1285.4	1267.5	1253.2	1242.5	1231.8	1214.0	1196.1	1174.7	1156.8	1139.0
27.5°	1246.1	1228.2	1210.4	1189.0	1181.8	1167.5	1149.7	1131.8	1110.4	1092.6	1071.1
30°	1181.8	1164.0	1142.6	1124.7	1117.6	1106.8	1085.4	1064.0	1046.1	1024.7	1006.9
32.5°	1117.6	1099.7	1081.9	1060.4	1049.7	1035.4	1014.0	992.6	971.2	953.3	931.9
35°	1049.7	1031.9	1010.4	989.0	974.7	960.5	935.5	910.5	889.0	867.6	856.9
37.5°	978.3	956.9	935.5	903.3	889.0	874.8	849.8	828.4	806.9	785.5	774.8
40°	899.8	874.8	849.8	821.2	806.9	789.1	767.7	746.2	724.8	707.0	692.7
42.5°	821.2	789.1	764.1	731.9	721.2	707.0	685.5	660.5	642.7	628.4	614.1
45°	731.9	710.5	682.0	653.4	639.1	628.4	607.0	585.6	567.7	553.4	542.7
47.5°	639.1	628.4	599.8	571.3	564.1	549.9	528.4	510.6	496.3	485.6	474.9
50°	553.4	546.3	528.4	499.9	489.2	478.4	460.6	446.3	432.0	421.3	414.2
52.5°	474.9	467.7	457.0	435.6	424.9	414.2	399.9	385.6	374.9	364.2	360.6
55°	403.5	396.3	385.6	371.3	364.2	353.5	342.8	332.1	321.3	317.8	310.6
57.5°	342.8	332.1	324.9	314.2	310.6	303.5	292.8	285.6	278.5	271.4	264.2
60°	289.2	282.1	274.9	267.8	264.2	260.6	249.9	242.8	235.7	232.1	224.9
62.5°	246.4	239.2	232.1	224.9	221.4	217.8	210.7	203.5	196.4	196.4	189.2
65°	207.1	199.9	196.4	189.2	185.7	182.1	175.0	171.4	164.2	160.7	157.1
67.5°	171.4	167.8	164.2	153.5	153.5	150.0	142.8	139.2	135.7	132.1	128.5
70°	139.2	135.7	132.1	128.5	125.0	121.4	117.8	114.3	107.1	107.1	103.5
72.5°	114.3	110.7	103.5	100.0	100.0	96.4	92.8	89.3	85.7	82.1	82.1
75°	89.3	85.7	82.1	78.6	75.0	75.0	71.4	67.8	67.8	64.3	60.7
77.5°	67.8	64.3	60.7	57.1	57.1	53.6	53.6	50.0	50.0	46.4	46.4
80°	46.4	46.4	42.8	42.8	39.3	39.3	35.7	35.7	35.7	32.1	32.1
82.5°	32.1	28.6	28.6	28.6	25.0	25.0	25.0	25.0	21.4	21.4	21.4
85°	17.9	17.9	14.3	14.3	14.3	14.3	14.3	14.3	14.3	10.7	10.7
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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°	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3
2.5°	1528.2	1524.6	1521.0	1521.0	1521.0	1517.5	1517.5	1513.9	1510.3	1510.3	1506.7
5°	1506.7	1503.2	1499.6	1496.0	1496.0	1488.9	1488.9	1485.3	1481.7	1478.2	1474.6
7.5°	1481.7	1474.6	1471.0	1463.9	1463.9	1460.3	1449.6	1446.0	1442.5	1435.3	1431.8
10°	1449.6	1438.9	1431.8	1428.2	1421.0	1417.5	1406.8	1403.2	1396.1	1392.5	1385.3
12.5°	1406.8	1396.1	1385.3	1381.8	1378.2	1367.5	1360.4	1349.6	1342.5	1335.4	1328.2
15°	1360.4	1349.6	1335.4	1331.8	1328.2	1313.9	1303.2	1296.1	1285.4	1278.2	1271.1
17.5°	1306.8	1292.5	1278.2	1274.7	1267.5	1253.2	1246.1	1235.4	1221.1	1214.0	1206.8
20°	1249.7	1235.4	1221.1	1217.5	1210.4	1196.1	1181.8	1171.1	1160.4	1153.3	1142.6
22.5°	1185.4	1171.1	1153.3	1146.1	1142.6	1124.7	1114.0	1103.3	1092.6	1078.3	1071.1
25°	1124.7	1106.8	1092.6	1081.9	1074.7	1060.4	1049.7	1031.9	1024.7	1010.4	1003.3
27.5°	1056.9	1039.0	1024.7	1014.0	1006.9	996.2	978.3	964.0	953.3	942.6	935.5
30°	989.0	971.2	956.9	946.2	939.0	924.8	906.9	899.8	885.5	874.8	864.1
32.5°	917.6	899.8	881.9	878.3	867.6	853.3	842.6	828.4	817.6	806.9	796.2
35°	835.5	824.8	810.5	806.9	799.8	785.5	774.8	764.1	753.4	739.1	728.4
37.5°	756.9	742.7	735.5	728.4	724.8	717.7	707.0	696.2	685.5	674.8	671.2
40°	678.4	667.7	657.0	657.0	653.4	646.3	639.1	632.0	624.8	614.1	607.0
42.5°	603.4	592.7	589.1	582.0	578.4	574.8	567.7	564.1	560.6	553.4	546.3
45°	532.0	524.9	517.7	514.1	510.6	507.0	507.0	499.9	496.3	492.7	485.6
47.5°	464.2	460.6	457.0	453.5	449.9	449.9	442.7	439.2	435.6	435.6	428.5
50°	407.0	403.5	399.9	396.3	392.8	392.8	389.2	385.6	382.0	378.5	371.3
52.5°	357.0	353.5	346.3	346.3	346.3	342.8	339.2	335.6	332.1	328.5	324.9
55°	307.1	303.5	299.9	299.9	296.3	296.3	292.8	289.2	285.6	282.1	278.5
57.5°	264.2	260.6	257.1	257.1	253.5	253.5	249.9	246.4	239.2	235.7	232.1
60°	224.9	221.4	217.8	217.8	214.2	210.7	210.7	203.5	199.9	196.4	189.2
62.5°	185.7	182.1	182.1	178.5	178.5	178.5	175.0	167.8	164.2	157.1	153.5
65°	153.5	150.0	150.0	146.4	146.4	142.8	139.2	135.7	128.5	125.0	117.8
67.5°	125.0	125.0	121.4	117.8	117.8	114.3	110.7	103.5	100.0	92.8	89.3
70°	100.0	96.4	96.4	92.8	89.3	85.7	82.1	78.6	75.0	75.0	75.0
72.5°	78.6	75.0	75.0	71.4	71.4	64.3	60.7	60.7	60.7	60.7	60.7
75°	60.7	57.1	53.6	53.6	50.0	50.0	46.4	46.4	46.4	46.4	50.0
77.5°	42.8	42.8	39.3	39.3	35.7	35.7	35.7	35.7	35.7	35.7	39.3
80°	32.1	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
82.5°	21.4	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	21.4
85°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	14.3	10.7	10.7
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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: P238357

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3	1535.3
2.5°	1506.7	1506.7	1506.7	1506.7	1506.7	1503.2	1506.7	1506.7
5°	1474.6	1471.0	1471.0	1467.5	1467.5	1467.5	1467.5	1463.9
7.5°	1428.2	1424.6	1424.6	1424.6	1421.0	1421.0	1417.5	1421.0
10°	1378.2	1374.6	1371.1	1374.6	1367.5	1367.5	1367.5	1367.5
12.5°	1324.6	1321.1	1317.5	1313.9	1313.9	1310.4	1310.4	1310.4
15°	1263.9	1260.4	1256.8	1253.2	1253.2	1246.1	1246.1	1242.5
17.5°	1199.7	1196.1	1192.5	1189.0	1181.8	1181.8	1178.3	1181.8
20°	1131.8	1124.7	1121.1	1121.1	1117.6	1114.0	1110.4	1110.4
22.5°	1064.0	1056.9	1056.9	1049.7	1046.1	1042.6	1039.0	1035.4
25°	992.6	985.5	985.5	978.3	974.7	971.2	971.2	967.6
27.5°	924.8	914.0	914.0	910.5	903.3	899.8	899.8	903.3
30°	856.9	849.8	846.2	839.1	835.5	831.9	828.4	831.9
32.5°	789.1	778.4	774.8	774.8	771.2	767.7	764.1	760.5
35°	721.2	717.7	710.5	707.0	699.8	699.8	696.2	696.2
37.5°	660.5	649.8	646.3	642.7	639.1	635.5	632.0	635.5
40°	596.3	589.1	582.0	582.0	574.8	571.3	567.7	571.3
42.5°	539.1	532.0	528.4	521.3	514.1	510.6	510.6	507.0
45°	482.0	471.3	471.3	460.6	457.0	453.5	449.9	449.9
47.5°	424.9	417.7	410.6	410.6	399.9	396.3	392.8	392.8
50°	371.3	360.6	357.0	353.5	346.3	339.2	335.6	335.6
52.5°	317.8	310.6	303.5	303.5	296.3	289.2	285.6	282.1
55°	271.4	264.2	260.6	253.5	249.9	239.2	235.7	235.7
57.5°	224.9	217.8	214.2	210.7	203.5	196.4	189.2	189.2
60°	185.7	178.5	178.5	171.4	164.2	157.1	150.0	150.0
62.5°	146.4	139.2	139.2	135.7	128.5	125.0	121.4	117.8
65°	114.3	107.1	107.1	107.1	107.1	107.1	103.5	107.1
67.5°	89.3	89.3	89.3	89.3	89.3	89.3	89.3	89.3
70°	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
72.5°	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
75°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
77.5°	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3
80°	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
82.5°	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
85°	10.7	14.3	14.3	14.3	14.3	14.3	10.7	10.7
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)