

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: P238372

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238372  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-28)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS640D010-S6M24-61SWWMB-3000K  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, WITH 6" WALL WASH DISTRIBUTION, WW TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2407.4 lumens  
Efficiency: N/A  
Efficacy: 63.4 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.02 / 1.12  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

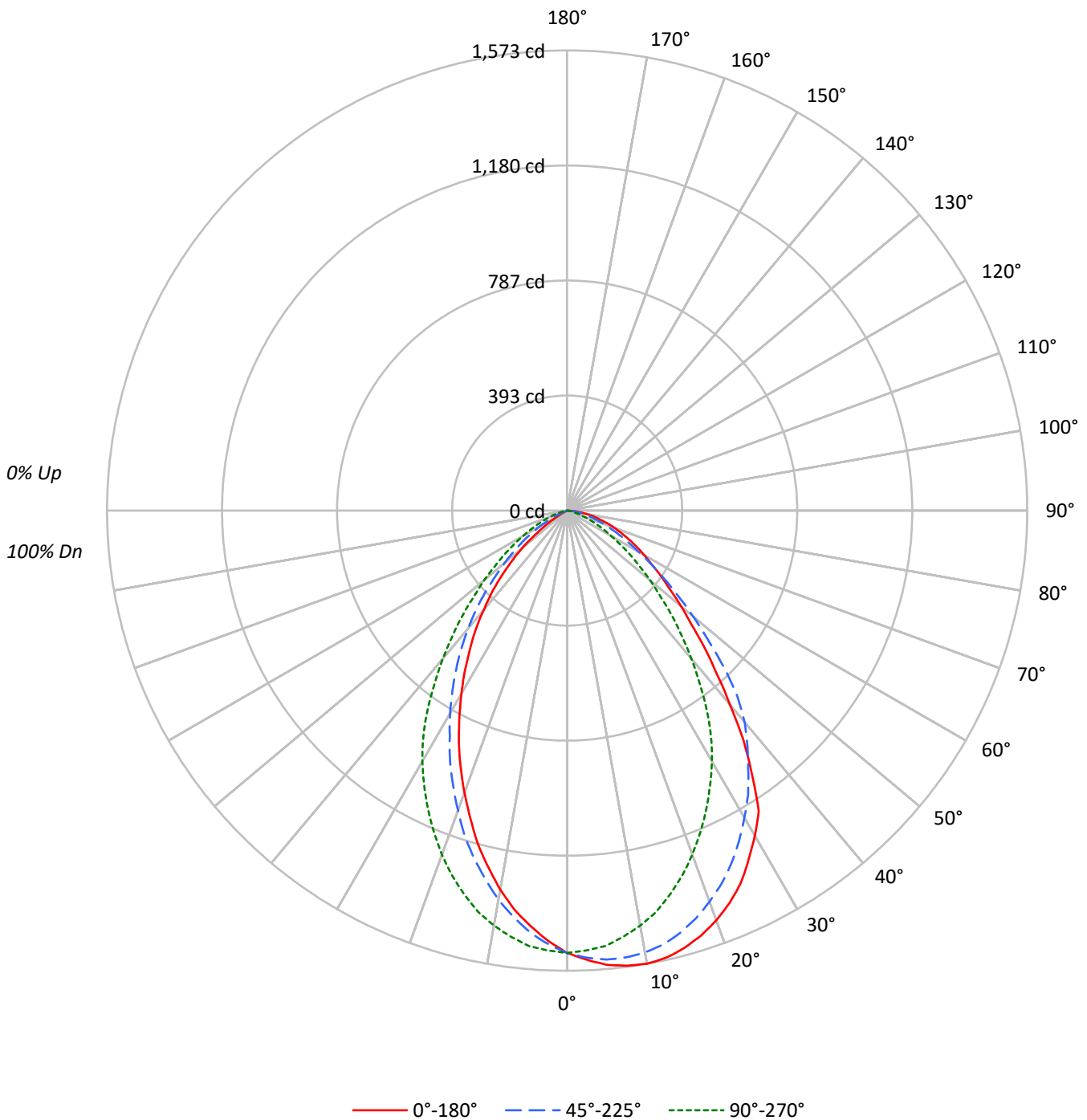
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	83	86	83	81	79					79			
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	72	67	88	78	72	67	76	70	66	74	69	65	72	68	64	62					62			
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56					56			
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46					46			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42					42			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35					35			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	65104	65104	65104
5°	67359	64580	61645
10°	68763	62983	57513
15°	68992	60550	52580
20°	68298	57324	47006
25°	66737	53493	41606
30°	63801	49229	35900
35°	57870	43778	30438
40°	48623	37168	24916
45°	40486	30689	19369
50°	34000	24663	13651
55°	29516	19585	7244
60°	26161	15087	1843
65°	23677	11288	0
70°	21602	7654	0
75°	19031	4758	0
80°	16836	2653	0
85°	12350	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.9	5.9
10°-20°	381.9	15.9
20°-30°	520.5	21.6
30°-40°	531.3	22.1
40°-50°	410.7	17.1
50°-60°	248.0	10.3
60°-70°	118.9	4.9
70°-80°	46.0	1.9
80°-90°	9.2	0.4
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°	1043.3	43.3
0°-40°	1574.6	65.4
0°-60°	2233.3	92.8
0°-90°	2407.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2407.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1512	1512	1512	1512	1512	
5°	1558	1541	1494	1448	1426	149
15°	1548	1494	1358	1230	1180	436
25°	1405	1330	1126	947	876	644
35°	1101	1080	833	661	579	683
45°	665	758	504	397	318	516
55°	393	404	261	186	96	354
65°	232	197	111	43	0	232
75°	114	82	29	0	0	124
85°	25	14	0	0	0	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°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1537.1	1537.1	1537.1	1537.1	1537.1	1537.1	1537.1	1533.5	1533.5	1529.9	1529.9
5°	1558.5	1558.5	1558.5	1555.0	1555.0	1551.4	1551.4	1547.8	1547.8	1540.7	1540.7
7.5°	1569.3	1569.3	1569.3	1565.7	1565.7	1562.1	1562.1	1558.5	1551.4	1547.8	1540.7
10°	1572.8	1572.8	1569.3	1569.3	1562.1	1562.1	1562.1	1555.0	1547.8	1540.7	1533.5
12.5°	1565.7	1562.1	1562.1	1558.5	1555.0	1551.4	1547.8	1544.2	1537.1	1526.4	1519.2
15°	1547.8	1547.8	1547.8	1544.2	1537.1	1533.5	1533.5	1526.4	1515.6	1504.9	1494.2
17.5°	1522.8	1522.8	1522.8	1519.2	1512.1	1508.5	1504.9	1497.8	1487.0	1476.3	1462.0
20°	1490.6	1490.6	1487.0	1483.5	1476.3	1476.3	1472.7	1462.0	1451.3	1437.0	1422.7
22.5°	1451.3	1451.3	1447.7	1444.1	1437.0	1433.4	1429.8	1419.1	1408.4	1394.1	1379.8
25°	1404.8	1401.3	1397.7	1394.1	1390.5	1383.4	1379.8	1372.7	1361.9	1344.1	1329.8
27.5°	1344.1	1344.1	1340.5	1336.9	1333.3	1329.8	1326.2	1315.5	1304.7	1286.9	1272.6
30°	1283.3	1283.3	1279.7	1276.1	1272.6	1269.0	1261.8	1251.1	1244.0	1229.7	1211.8
32.5°	1218.9	1215.4	1215.4	1215.4	1208.2	1208.2	1201.1	1190.3	1176.1	1165.3	1151.0
35°	1101.0	1104.6	1108.1	1118.9	1122.4	1129.6	1129.6	1126.0	1111.7	1097.4	1079.5
37.5°	990.2	983.0	993.7	1000.9	1015.2	1022.3	1025.9	1040.2	1047.4	1029.5	1011.6
40°	865.1	872.2	879.4	890.1	904.4	908.0	918.7	929.4	947.3	954.4	943.7
42.5°	757.8	757.8	768.5	779.3	790.0	800.7	811.4	825.7	847.2	857.9	861.5
45°	664.9	661.3	664.9	679.2	693.5	700.6	707.8	725.6	747.1	761.4	757.8
47.5°	575.5	579.1	586.2	593.4	600.5	607.7	614.8	636.3	650.6	654.2	650.6
50°	507.6	504.0	511.2	514.7	525.5	529.0	536.2	546.9	557.6	561.2	561.2
52.5°	443.3	446.8	446.8	450.4	457.6	461.1	464.7	475.4	475.4	479.0	475.4
55°	393.2	389.6	393.2	396.8	400.4	403.9	407.5	407.5	407.5	407.5	403.9
57.5°	343.2	343.2	346.7	346.7	350.3	353.9	353.9	350.3	350.3	343.2	339.6
60°	303.8	303.8	303.8	303.8	307.4	307.4	307.4	300.3	293.1	293.1	282.4
62.5°	268.1	264.5	268.1	268.1	268.1	264.5	260.9	253.8	250.2	243.1	235.9
65°	232.4	232.4	232.4	232.4	228.8	228.8	225.2	218.1	210.9	207.3	196.6
67.5°	200.2	200.2	200.2	200.2	196.6	193.0	189.5	182.3	175.2	171.6	160.9
70°	171.6	168.0	168.0	168.0	164.4	160.9	157.3	153.7	146.6	139.4	132.3
72.5°	143.0	143.0	139.4	139.4	135.8	132.3	128.7	125.1	118.0	110.8	103.7
75°	114.4	114.4	114.4	110.8	107.2	107.2	103.7	96.5	92.9	85.8	82.2
77.5°	92.9	89.4	89.4	85.8	82.2	82.2	78.6	75.1	71.5	67.9	60.8
80°	67.9	67.9	67.9	64.3	60.8	60.8	57.2	53.6	50.0	46.5	42.9
82.5°	46.5	46.5	46.5	42.9	42.9	39.3	39.3	35.7	35.7	32.2	28.6
85°	25.0	25.0	25.0	25.0	25.0	21.4	21.4	21.4	17.9	17.9	14.3
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	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°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1526.4	1526.4	1522.8	1519.2	1519.2	1515.6	1512.1	1512.1	1508.5	1504.9	1501.3
5°	1533.5	1529.9	1522.8	1519.2	1515.6	1515.6	1508.5	1501.3	1497.8	1494.2	1487.0
7.5°	1533.5	1526.4	1519.2	1512.1	1508.5	1504.9	1494.2	1487.0	1479.9	1469.2	1462.0
10°	1526.4	1515.6	1504.9	1494.2	1490.6	1483.5	1472.7	1465.6	1451.3	1440.6	1429.8
12.5°	1508.5	1497.8	1483.5	1469.2	1462.0	1454.9	1440.6	1429.8	1415.6	1404.8	1390.5
15°	1483.5	1469.2	1454.9	1440.6	1429.8	1426.3	1408.4	1390.5	1376.2	1358.4	1340.5
17.5°	1447.7	1433.4	1415.6	1401.3	1390.5	1383.4	1361.9	1344.1	1326.2	1308.3	1290.4
20°	1408.4	1390.5	1372.7	1351.2	1344.1	1333.3	1311.9	1290.4	1269.0	1251.1	1229.7
22.5°	1361.9	1344.1	1322.6	1304.7	1290.4	1279.7	1258.3	1233.2	1211.8	1190.3	1168.9
25°	1308.3	1290.4	1269.0	1247.5	1233.2	1222.5	1197.5	1172.5	1151.0	1126.0	1104.6
27.5°	1254.7	1233.2	1211.8	1183.2	1172.5	1158.2	1133.2	1108.1	1083.1	1058.1	1033.1
30°	1193.9	1168.9	1147.5	1118.9	1108.1	1093.8	1065.2	1040.2	1015.2	990.2	961.6
32.5°	1129.6	1104.6	1079.5	1054.5	1040.2	1025.9	1000.9	972.3	940.1	915.1	893.7
35°	1058.1	1036.6	1011.6	983.0	965.1	950.8	915.1	886.5	854.3	832.9	807.9
37.5°	993.7	965.1	933.0	897.2	879.4	861.5	825.7	797.1	772.1	743.5	722.1
40°	915.1	882.9	847.2	804.3	793.6	775.7	743.5	711.4	686.3	661.3	639.9
42.5°	829.3	793.6	761.4	725.6	707.8	689.9	657.7	625.6	600.5	579.1	557.6
45°	743.5	711.4	675.6	639.9	622.0	607.7	575.5	546.9	525.5	504.0	486.1
47.5°	647.0	625.6	593.4	561.2	539.8	525.5	500.4	475.4	450.4	429.0	418.2
50°	554.1	539.8	514.7	482.6	468.3	454.0	425.4	403.9	386.1	368.2	353.9
52.5°	468.3	457.6	439.7	411.1	400.4	382.5	361.0	343.2	325.3	311.0	300.3
55°	396.8	382.5	368.2	350.3	336.0	328.9	303.8	289.5	275.2	260.9	250.2
57.5°	328.9	321.7	307.4	293.1	282.4	271.7	253.8	239.5	228.8	214.5	207.3
60°	278.8	264.5	253.8	239.5	232.4	225.2	210.9	196.6	185.9	175.2	168.0
62.5°	228.8	218.1	207.3	193.0	189.5	182.3	171.6	157.3	150.1	139.4	132.3
65°	189.5	178.7	171.6	157.3	153.7	146.6	135.8	125.1	118.0	110.8	103.7
67.5°	153.7	146.6	135.8	125.1	121.5	114.4	103.7	96.5	89.4	82.2	78.6
70°	125.1	118.0	107.2	96.5	92.9	89.4	78.6	75.1	67.9	60.8	57.2
72.5°	100.1	92.9	82.2	75.1	71.5	67.9	60.8	53.6	50.0	42.9	39.3
75°	75.1	67.9	60.8	53.6	50.0	50.0	42.9	39.3	35.7	28.6	25.0
77.5°	57.2	50.0	42.9	39.3	35.7	32.2	28.6	25.0	21.4	17.9	14.3
80°	39.3	35.7	28.6	25.0	25.0	21.4	17.9	17.9	14.3	10.7	7.1
82.5°	25.0	21.4	17.9	14.3	14.3	14.3	10.7	7.1	7.1	7.1	3.6
85°	10.7	10.7	7.1	7.1	7.1	7.1	3.6	3.6	3.6	0.0	0.0
87.5°	3.6	3.6	0.0	3.6	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	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°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1501.3	1497.8	1494.2	1494.2	1490.6	1490.6	1487.0	1487.0	1483.5	1483.5	1479.9
5°	1479.9	1476.3	1469.2	1469.2	1465.6	1462.0	1454.9	1451.3	1447.7	1444.1	1440.6
7.5°	1454.9	1444.1	1437.0	1433.4	1429.8	1422.7	1415.6	1408.4	1401.3	1397.7	1390.5
10°	1415.6	1404.8	1397.7	1394.1	1387.0	1376.2	1369.1	1358.4	1351.2	1344.1	1336.9
12.5°	1376.2	1361.9	1347.6	1344.1	1336.9	1322.6	1315.5	1301.2	1290.4	1283.3	1276.1
15°	1326.2	1311.9	1294.0	1286.9	1283.3	1265.4	1254.7	1244.0	1229.7	1218.9	1211.8
17.5°	1269.0	1254.7	1236.8	1226.1	1218.9	1204.6	1186.8	1176.1	1165.3	1147.5	1140.3
20°	1211.8	1190.3	1172.5	1165.3	1154.6	1136.7	1122.4	1108.1	1090.3	1079.5	1065.2
22.5°	1143.9	1126.0	1104.6	1093.8	1086.7	1065.2	1050.9	1033.1	1018.8	1008.0	990.2
25°	1083.1	1058.1	1036.6	1025.9	1015.2	997.3	975.9	961.6	947.3	933.0	918.7
27.5°	1011.6	986.6	965.1	958.0	947.3	922.3	908.0	886.5	868.6	857.9	843.6
30°	940.1	915.1	893.7	882.9	872.2	850.8	832.9	815.0	800.7	786.4	772.1
32.5°	868.6	847.2	825.7	815.0	804.3	782.8	765.0	743.5	729.2	711.4	697.1
35°	786.4	765.0	747.1	736.4	729.2	711.4	693.5	675.6	661.3	643.4	629.1
37.5°	700.6	679.2	668.5	657.7	650.6	636.3	622.0	607.7	593.4	579.1	561.2
40°	618.4	607.7	586.2	582.7	575.5	561.2	550.5	536.2	525.5	511.2	496.9
42.5°	543.3	525.5	511.2	507.6	500.4	489.7	479.0	468.3	461.1	446.8	436.1
45°	471.9	457.6	443.3	436.1	432.5	421.8	411.1	403.9	396.8	386.1	375.3
47.5°	403.9	389.6	378.9	375.3	368.2	361.0	350.3	343.2	332.4	325.3	314.6
50°	343.2	332.4	321.7	318.1	311.0	307.4	296.7	289.5	278.8	268.1	260.9
52.5°	289.5	278.8	271.7	268.1	264.5	253.8	246.6	239.5	228.8	221.6	210.9
55°	239.5	232.4	225.2	221.6	218.1	210.9	203.8	193.0	185.9	175.2	164.4
57.5°	196.6	189.5	182.3	178.7	175.2	168.0	160.9	153.7	143.0	132.3	121.5
60°	157.3	153.7	146.6	143.0	139.4	132.3	125.1	114.4	107.2	92.9	85.8
62.5°	125.1	121.5	114.4	110.8	107.2	96.5	89.4	82.2	71.5	60.8	50.0
65°	96.5	89.4	82.2	82.2	78.6	71.5	60.8	50.0	42.9	32.2	21.4
67.5°	71.5	64.3	57.2	57.2	53.6	46.5	35.7	28.6	17.9	10.7	0.0
70°	50.0	46.5	39.3	35.7	32.2	25.0	17.9	10.7	3.6	0.0	0.0
72.5°	35.7	28.6	25.0	21.4	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	3.6	0.0	0.0	0.0	0.0	0.0
77.5°	10.7	10.7	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	7.1	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°	0.0	0.0	0.0	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	0.0	0.0	0.0





TEST NUMBER: P238372

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

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1479.9	1476.3	1476.3	1476.3	1476.3	1476.3	1472.7	1472.7
5°	1437.0	1433.4	1433.4	1429.8	1429.8	1429.8	1426.3	1426.3
7.5°	1387.0	1383.4	1379.8	1379.8	1376.2	1376.2	1372.7	1376.2
10°	1329.8	1322.6	1322.6	1322.6	1319.0	1315.5	1315.5	1315.5
12.5°	1269.0	1261.8	1258.3	1254.7	1251.1	1251.1	1247.5	1247.5
15°	1201.1	1193.9	1190.3	1186.8	1183.2	1179.6	1176.1	1179.6
17.5°	1129.6	1122.4	1118.9	1115.3	1108.1	1108.1	1104.6	1101.0
20°	1054.5	1047.4	1043.8	1040.2	1036.6	1033.1	1029.5	1025.9
22.5°	979.4	975.9	965.1	965.1	958.0	954.4	950.8	950.8
25°	904.4	897.2	893.7	886.5	879.4	875.8	875.8	875.8
27.5°	829.3	822.2	815.0	811.4	807.9	804.3	797.1	797.1
30°	757.8	747.1	739.9	739.9	732.8	725.6	725.6	722.1
32.5°	686.3	675.6	668.5	664.9	661.3	654.2	650.6	650.6
35°	614.8	604.1	600.5	593.4	586.2	586.2	575.5	579.1
37.5°	550.5	536.2	532.6	529.0	518.3	514.7	511.2	514.7
40°	482.6	471.9	464.7	461.1	454.0	446.8	443.3	443.3
42.5°	418.2	411.1	403.9	400.4	389.6	382.5	378.9	382.5
45°	361.0	350.3	346.7	339.6	328.9	321.7	318.1	318.1
47.5°	303.8	296.7	286.0	282.4	271.7	264.5	257.4	257.4
50°	250.2	239.5	232.4	225.2	218.1	207.3	200.2	203.8
52.5°	200.2	185.9	182.3	175.2	164.4	153.7	146.6	146.6
55°	153.7	143.0	135.8	132.3	118.0	107.2	100.1	96.5
57.5°	110.8	100.1	96.5	89.4	78.6	67.9	57.2	57.2
60°	75.1	64.3	57.2	53.6	42.9	35.7	25.0	21.4
62.5°	39.3	32.2	25.0	21.4	14.3	7.1	7.1	3.6
65°	10.7	3.6	3.6	3.6	3.6	3.6	3.6	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)