

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: P238382

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238382  
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-4000K  
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 / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2544.5 lumens  
Efficiency: N/A  
Efficacy: 67.0 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

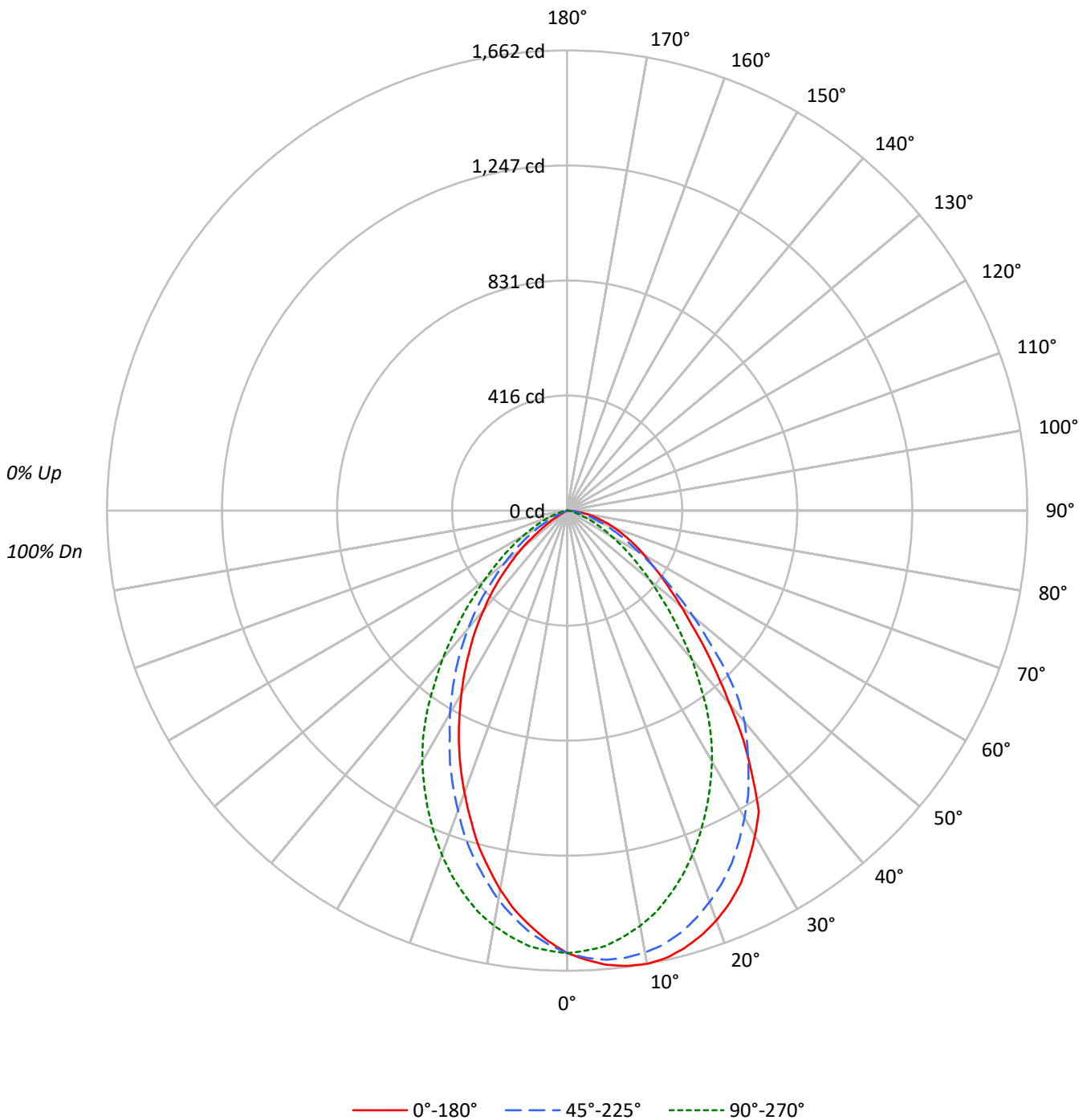
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	83	86	83	81	79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70
4	90	80	72	67	88	78	72	67	76	70	66	74	69	65	72	68	64	62
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35

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

	0°	90°	180°
0°	68812	68812	68812
5°	71197	68258	65154
10°	72680	66568	60788
15°	72924	63996	55575
20°	72188	60591	49681
25°	70538	56538	43977
30°	67435	52033	37944
35°	61166	46270	32173
40°	51388	39287	26332
45°	42787	32436	20477
50°	35936	26070	14428
55°	31197	20703	7657
60°	27650	15939	1955
65°	25021	11930	0
70°	22836	8082	0
75°	20112	5024	0
80°	17803	2802	0
85°	13042	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.9	5.9
10°-20°	403.6	15.9
20°-30°	550.2	21.6
30°-40°	561.5	22.1
40°-50°	434.1	17.1
50°-60°	262.2	10.3
60°-70°	125.7	4.9
70°-80°	48.6	1.9
80°-90°	9.8	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°	1102.7	43.3
0°-40°	1664.3	65.4
0°-60°	2360.5	92.8
0°-90°	2544.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2544.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1598	1598	1598	1598	1598	
5°	1647	1628	1579	1530	1508	158
15°	1636	1579	1436	1300	1247	461
25°	1485	1406	1190	1001	926	680
35°	1164	1141	880	699	612	722
45°	703	801	533	419	336	545
55°	416	427	276	196	102	374
65°	246	208	117	45	0	245
75°	121	87	30	0	0	131
85°	26	15	0	0	0	32
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°	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2
2.5°	1624.6	1624.6	1624.6	1624.6	1624.6	1624.6	1624.6	1620.8	1620.8	1617.1	1617.1
5°	1647.3	1647.3	1647.3	1643.5	1643.5	1639.7	1639.7	1636.0	1636.0	1628.4	1628.4
7.5°	1658.6	1658.6	1658.6	1654.8	1654.8	1651.1	1651.1	1647.3	1639.7	1636.0	1628.4
10°	1662.4	1662.4	1658.6	1658.6	1651.1	1651.1	1651.1	1643.5	1636.0	1628.4	1620.8
12.5°	1654.8	1651.1	1651.1	1647.3	1643.5	1639.7	1636.0	1632.2	1624.6	1613.3	1605.7
15°	1636.0	1636.0	1636.0	1632.2	1624.6	1620.8	1620.8	1613.3	1602.0	1590.6	1579.3
17.5°	1609.5	1609.5	1609.5	1605.7	1598.2	1594.4	1590.6	1583.1	1571.7	1560.4	1545.3
20°	1575.5	1575.5	1571.7	1568.0	1560.4	1560.4	1556.6	1545.3	1533.9	1518.8	1503.7
22.5°	1533.9	1533.9	1530.2	1526.4	1518.8	1515.1	1511.3	1499.9	1488.6	1473.5	1458.4
25°	1484.8	1481.1	1477.3	1473.5	1469.7	1462.2	1458.4	1450.8	1439.5	1420.6	1405.5
27.5°	1420.6	1420.6	1416.8	1413.0	1409.3	1405.5	1401.7	1390.4	1379.0	1360.2	1345.0
30°	1356.4	1356.4	1352.6	1348.8	1345.0	1341.3	1333.7	1322.4	1314.8	1299.7	1280.8
32.5°	1288.4	1284.6	1284.6	1284.6	1277.0	1277.0	1269.5	1258.1	1243.0	1231.7	1216.6
35°	1163.7	1167.5	1171.2	1182.6	1186.4	1193.9	1193.9	1190.1	1175.0	1159.9	1141.0
37.5°	1046.6	1039.0	1050.3	1057.9	1073.0	1080.6	1084.3	1099.5	1107.0	1088.1	1069.2
40°	914.3	921.9	929.4	940.8	955.9	959.7	971.0	982.3	1001.2	1008.8	997.4
42.5°	801.0	801.0	812.3	823.6	835.0	846.3	857.7	872.8	895.4	906.8	910.5
45°	702.7	699.0	702.7	717.9	733.0	740.5	748.1	767.0	789.6	804.8	801.0
47.5°	608.3	612.1	619.6	627.2	634.7	642.3	649.8	672.5	687.6	691.4	687.6
50°	536.5	532.7	540.3	544.1	555.4	559.2	566.7	578.1	589.4	593.2	593.2
52.5°	468.5	472.3	472.3	476.1	483.6	487.4	491.2	502.5	502.5	506.3	502.5
55°	415.6	411.8	415.6	419.4	423.2	426.9	430.7	430.7	430.7	430.7	426.9
57.5°	362.7	362.7	366.5	366.5	370.3	374.0	374.0	370.3	370.3	362.7	358.9
60°	321.1	321.1	321.1	321.1	324.9	324.9	324.9	317.4	309.8	309.8	298.5
62.5°	283.4	279.6	283.4	283.4	283.4	279.6	275.8	268.3	264.5	256.9	249.4
65°	245.6	245.6	245.6	245.6	241.8	241.8	238.0	230.5	222.9	219.1	207.8
67.5°	211.6	211.6	211.6	211.6	207.8	204.0	200.2	192.7	185.1	181.4	170.0
70°	181.4	177.6	177.6	177.6	173.8	170.0	166.2	162.5	154.9	147.3	139.8
72.5°	151.1	151.1	147.3	147.3	143.6	139.8	136.0	132.2	124.7	117.1	109.6
75°	120.9	120.9	120.9	117.1	113.3	113.3	109.6	102.0	98.2	90.7	86.9
77.5°	98.2	94.5	94.5	90.7	86.9	86.9	83.1	79.3	75.6	71.8	64.2
80°	71.8	71.8	71.8	68.0	64.2	64.2	60.5	56.7	52.9	49.1	45.3
82.5°	49.1	49.1	49.1	45.3	45.3	41.6	41.6	37.8	37.8	34.0	30.2
85°	26.4	26.4	26.4	26.4	26.4	22.7	22.7	22.7	18.9	18.9	15.1
87.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	3.8	3.8
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°	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2
2.5°	1613.3	1613.3	1609.5	1605.7	1605.7	1602.0	1598.2	1598.2	1594.4	1590.6	1586.8
5°	1620.8	1617.1	1609.5	1605.7	1602.0	1602.0	1594.4	1586.8	1583.1	1579.3	1571.7
7.5°	1620.8	1613.3	1605.7	1598.2	1594.4	1590.6	1579.3	1571.7	1564.2	1552.8	1545.3
10°	1613.3	1602.0	1590.6	1579.3	1575.5	1568.0	1556.6	1549.1	1533.9	1522.6	1511.3
12.5°	1594.4	1583.1	1568.0	1552.8	1545.3	1537.7	1522.6	1511.3	1496.2	1484.8	1469.7
15°	1568.0	1552.8	1537.7	1522.6	1511.3	1507.5	1488.6	1469.7	1454.6	1435.7	1416.8
17.5°	1530.2	1515.1	1496.2	1481.1	1469.7	1462.2	1439.5	1420.6	1401.7	1382.8	1363.9
20°	1488.6	1469.7	1450.8	1428.2	1420.6	1409.3	1386.6	1363.9	1341.3	1322.4	1299.7
22.5°	1439.5	1420.6	1397.9	1379.0	1363.9	1352.6	1329.9	1303.5	1280.8	1258.1	1235.5
25°	1382.8	1363.9	1341.3	1318.6	1303.5	1292.1	1265.7	1239.2	1216.6	1190.1	1167.5
27.5°	1326.1	1303.5	1280.8	1250.6	1239.2	1224.1	1197.7	1171.2	1144.8	1118.3	1091.9
30°	1261.9	1235.5	1212.8	1182.6	1171.2	1156.1	1125.9	1099.5	1073.0	1046.6	1016.3
32.5°	1193.9	1167.5	1141.0	1114.6	1099.5	1084.3	1057.9	1027.7	993.7	967.2	944.5
35°	1118.3	1095.7	1069.2	1039.0	1020.1	1005.0	967.2	937.0	903.0	880.3	853.9
37.5°	1050.3	1020.1	986.1	948.3	929.4	910.5	872.8	842.5	816.1	785.9	763.2
40°	967.2	933.2	895.4	850.1	838.8	819.9	785.9	751.9	725.4	699.0	676.3
42.5°	876.5	838.8	804.8	767.0	748.1	729.2	695.2	661.2	634.7	612.1	589.4
45°	785.9	751.9	714.1	676.3	657.4	642.3	608.3	578.1	555.4	532.7	513.8
47.5°	683.9	661.2	627.2	593.2	570.5	555.4	528.9	502.5	476.1	453.4	442.0
50°	585.6	570.5	544.1	510.1	494.9	479.8	449.6	426.9	408.0	389.2	374.0
52.5°	494.9	483.6	464.7	434.5	423.2	404.3	381.6	362.7	343.8	328.7	317.4
55°	419.4	404.3	389.2	370.3	355.2	347.6	321.1	306.0	290.9	275.8	264.5
57.5°	347.6	340.0	324.9	309.8	298.5	287.1	268.3	253.1	241.8	226.7	219.1
60°	294.7	279.6	268.3	253.1	245.6	238.0	222.9	207.8	196.5	185.1	177.6
62.5°	241.8	230.5	219.1	204.0	200.2	192.7	181.4	166.2	158.7	147.3	139.8
65°	200.2	188.9	181.4	166.2	162.5	154.9	143.6	132.2	124.7	117.1	109.6
67.5°	162.5	154.9	143.6	132.2	128.5	120.9	109.6	102.0	94.5	86.9	83.1
70°	132.2	124.7	113.3	102.0	98.2	94.5	83.1	79.3	71.8	64.2	60.5
72.5°	105.8	98.2	86.9	79.3	75.6	71.8	64.2	56.7	52.9	45.3	41.6
75°	79.3	71.8	64.2	56.7	52.9	52.9	45.3	41.6	37.8	30.2	26.4
77.5°	60.5	52.9	45.3	41.6	37.8	34.0	30.2	26.4	22.7	18.9	15.1
80°	41.6	37.8	30.2	26.4	26.4	22.7	18.9	18.9	15.1	11.3	7.6
82.5°	26.4	22.7	18.9	15.1	15.1	15.1	11.3	7.6	7.6	7.6	3.8
85°	11.3	11.3	7.6	7.6	7.6	7.6	3.8	3.8	3.8	0.0	0.0
87.5°	3.8	3.8	0.0	3.8	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°	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2
2.5°	1586.8	1583.1	1579.3	1579.3	1575.5	1575.5	1571.7	1571.7	1568.0	1568.0	1564.2
5°	1564.2	1560.4	1552.8	1552.8	1549.1	1545.3	1537.7	1533.9	1530.2	1526.4	1522.6
7.5°	1537.7	1526.4	1518.8	1515.1	1511.3	1503.7	1496.2	1488.6	1481.1	1477.3	1469.7
10°	1496.2	1484.8	1477.3	1473.5	1465.9	1454.6	1447.0	1435.7	1428.2	1420.6	1413.0
12.5°	1454.6	1439.5	1424.4	1420.6	1413.0	1397.9	1390.4	1375.3	1363.9	1356.4	1348.8
15°	1401.7	1386.6	1367.7	1360.2	1356.4	1337.5	1326.1	1314.8	1299.7	1288.4	1280.8
17.5°	1341.3	1326.1	1307.3	1295.9	1288.4	1273.3	1254.4	1243.0	1231.7	1212.8	1205.2
20°	1280.8	1258.1	1239.2	1231.7	1220.4	1201.5	1186.4	1171.2	1152.3	1141.0	1125.9
22.5°	1209.0	1190.1	1167.5	1156.1	1148.6	1125.9	1110.8	1091.9	1076.8	1065.5	1046.6
25°	1144.8	1118.3	1095.7	1084.3	1073.0	1054.1	1031.4	1016.3	1001.2	986.1	971.0
27.5°	1069.2	1042.8	1020.1	1012.6	1001.2	974.8	959.7	937.0	918.1	906.8	891.7
30°	993.7	967.2	944.5	933.2	921.9	899.2	880.3	861.4	846.3	831.2	816.1
32.5°	918.1	895.4	872.8	861.4	850.1	827.4	808.5	785.9	770.8	751.9	736.7
35°	831.2	808.5	789.6	778.3	770.8	751.9	733.0	714.1	699.0	680.1	665.0
37.5°	740.5	717.9	706.5	695.2	687.6	672.5	657.4	642.3	627.2	612.1	593.2
40°	653.6	642.3	619.6	615.8	608.3	593.2	581.8	566.7	555.4	540.3	525.2
42.5°	574.3	555.4	540.3	536.5	528.9	517.6	506.3	494.9	487.4	472.3	460.9
45°	498.7	483.6	468.5	460.9	457.2	445.8	434.5	426.9	419.4	408.0	396.7
47.5°	426.9	411.8	400.5	396.7	389.2	381.6	370.3	362.7	351.4	343.8	332.5
50°	362.7	351.4	340.0	336.3	328.7	324.9	313.6	306.0	294.7	283.4	275.8
52.5°	306.0	294.7	287.1	283.4	279.6	268.3	260.7	253.1	241.8	234.2	222.9
55°	253.1	245.6	238.0	234.2	230.5	222.9	215.4	204.0	196.5	185.1	173.8
57.5°	207.8	200.2	192.7	188.9	185.1	177.6	170.0	162.5	151.1	139.8	128.5
60°	166.2	162.5	154.9	151.1	147.3	139.8	132.2	120.9	113.3	98.2	90.7
62.5°	132.2	128.5	120.9	117.1	113.3	102.0	94.5	86.9	75.6	64.2	52.9
65°	102.0	94.5	86.9	86.9	83.1	75.6	64.2	52.9	45.3	34.0	22.7
67.5°	75.6	68.0	60.5	60.5	56.7	49.1	37.8	30.2	18.9	11.3	0.0
70°	52.9	49.1	41.6	37.8	34.0	26.4	18.9	11.3	3.8	0.0	0.0
72.5°	37.8	30.2	26.4	22.7	18.9	11.3	3.8	0.0	0.0	0.0	0.0
75°	22.7	18.9	11.3	11.3	7.6	3.8	0.0	0.0	0.0	0.0	0.0
77.5°	11.3	11.3	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	7.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	3.8	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: P238382

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

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2	1598.2
2.5°	1564.2	1560.4	1560.4	1560.4	1560.4	1560.4	1556.6	1556.6
5°	1518.8	1515.1	1515.1	1511.3	1511.3	1511.3	1507.5	1507.5
7.5°	1465.9	1462.2	1458.4	1458.4	1454.6	1454.6	1450.8	1454.6
10°	1405.5	1397.9	1397.9	1397.9	1394.2	1390.4	1390.4	1390.4
12.5°	1341.3	1333.7	1329.9	1326.1	1322.4	1322.4	1318.6	1318.6
15°	1269.5	1261.9	1258.1	1254.4	1250.6	1246.8	1243.0	1246.8
17.5°	1193.9	1186.4	1182.6	1178.8	1171.2	1171.2	1167.5	1163.7
20°	1114.6	1107.0	1103.2	1099.5	1095.7	1091.9	1088.1	1084.3
22.5°	1035.2	1031.4	1020.1	1020.1	1012.6	1008.8	1005.0	1005.0
25°	955.9	948.3	944.5	937.0	929.4	925.7	925.7	925.7
27.5°	876.5	869.0	861.4	857.7	853.9	850.1	842.5	842.5
30°	801.0	789.6	782.1	782.1	774.5	767.0	767.0	763.2
32.5°	725.4	714.1	706.5	702.7	699.0	691.4	687.6	687.6
35°	649.8	638.5	634.7	627.2	619.6	619.6	608.3	612.1
37.5°	581.8	566.7	563.0	559.2	547.8	544.1	540.3	544.1
40°	510.1	498.7	491.2	487.4	479.8	472.3	468.5	468.5
42.5°	442.0	434.5	426.9	423.2	411.8	404.3	400.5	404.3
45°	381.6	370.3	366.5	358.9	347.6	340.0	336.3	336.3
47.5°	321.1	313.6	302.3	298.5	287.1	279.6	272.0	272.0
50°	264.5	253.1	245.6	238.0	230.5	219.1	211.6	215.4
52.5°	211.6	196.5	192.7	185.1	173.8	162.5	154.9	154.9
55°	162.5	151.1	143.6	139.8	124.7	113.3	105.8	102.0
57.5°	117.1	105.8	102.0	94.5	83.1	71.8	60.5	60.5
60°	79.3	68.0	60.5	56.7	45.3	37.8	26.4	22.7
62.5°	41.6	34.0	26.4	22.7	15.1	7.6	7.6	3.8
65°	11.3	3.8	3.8	3.8	3.8	3.8	3.8	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)