

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: P238377

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P238377
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
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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2668.2 lumens
Efficiency: N/A
Efficacy: 70.2 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

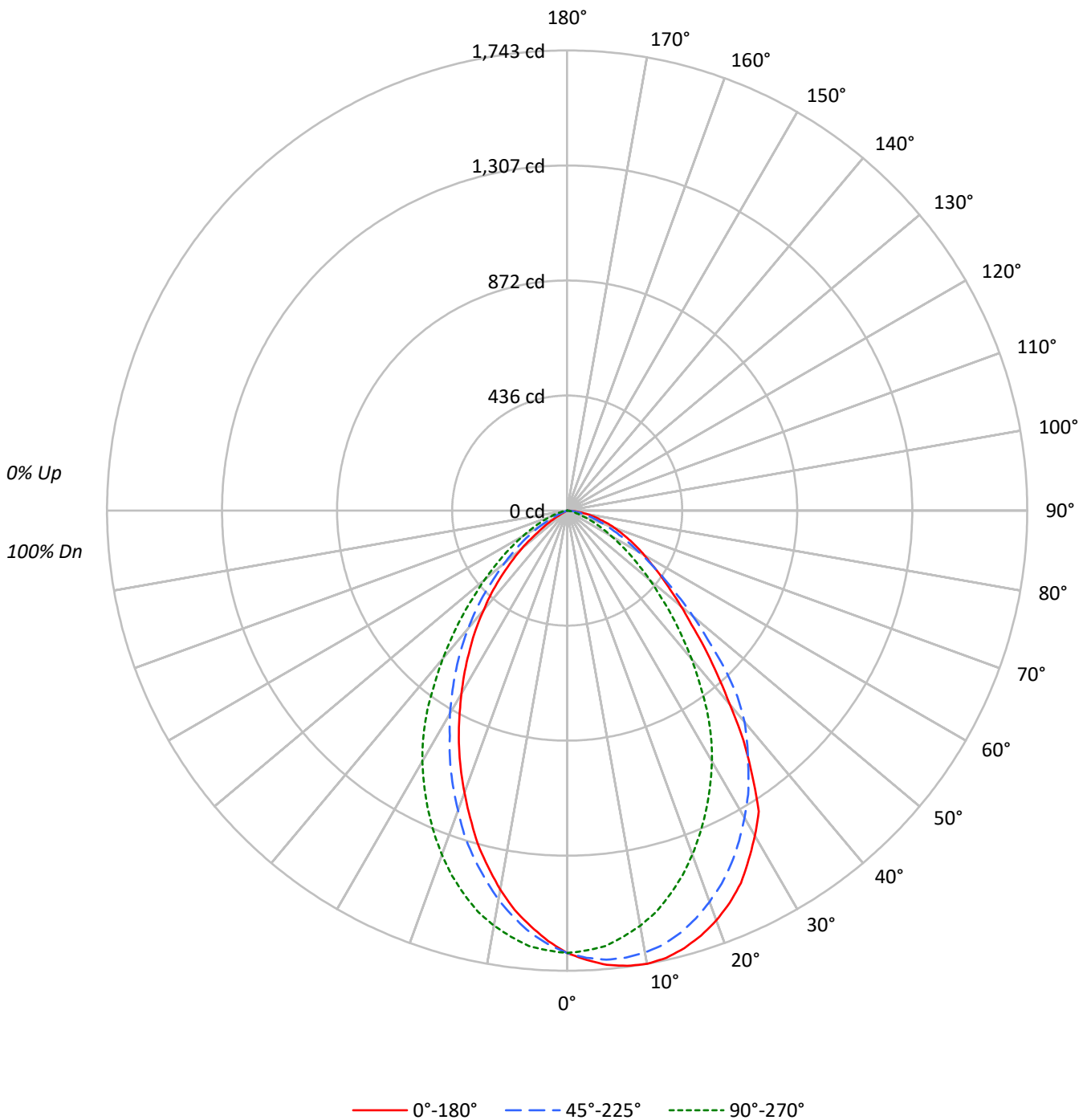
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
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°	72157	72157	72157
5°	74658	71573	68322
10°	76212	69803	63744
15°	76468	67107	58277
20°	75697	63532	52096
25°	73968	59288	46115
30°	70712	54559	39788
35°	64135	48519	33734
40°	53890	41193	27614
45°	44870	34013	21470
50°	37684	27336	15125
55°	32713	21709	8032
60°	29002	16714	2049
65°	26234	12511	0
70°	23944	8485	0
75°	21094	5273	0
80°	18670	2951	0
85°	13684	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.1	5.9
10°-20°	423.3	15.9
20°-30°	576.9	21.6
30°-40°	588.8	22.1
40°-50°	455.2	17.1
50°-60°	274.9	10.3
60°-70°	131.8	4.9
70°-80°	51.0	1.9
80°-90°	10.2	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°	1156.3	43.3
0°-40°	1745.2	65.4
0°-60°	2475.2	92.8
0°-90°	2668.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2668.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1676	1676	1676	1676	1676	
5°	1727	1708	1656	1604	1581	165
15°	1716	1656	1506	1363	1307	483
25°	1557	1474	1248	1050	971	713
35°	1220	1196	923	733	642	757
45°	737	840	559	440	353	572
55°	436	448	289	206	107	392
65°	258	218	123	48	0	257
75°	127	91	32	0	0	137
85°	28	16	0	0	0	34
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°	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9
2.5°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1699.6	1699.6	1695.7	1695.7
5°	1727.4	1727.4	1727.4	1723.4	1723.4	1719.4	1719.4	1715.5	1715.5	1707.6	1707.6
7.5°	1739.2	1739.2	1739.2	1735.3	1735.3	1731.3	1731.3	1727.4	1719.4	1715.5	1707.6
10°	1743.2	1743.2	1739.2	1739.2	1731.3	1731.3	1731.3	1723.4	1715.5	1707.6	1699.6
12.5°	1735.3	1731.3	1731.3	1727.4	1723.4	1719.4	1715.5	1711.5	1703.6	1691.7	1683.8
15°	1715.5	1715.5	1715.5	1711.5	1703.6	1699.6	1699.6	1691.7	1679.8	1667.9	1656.0
17.5°	1687.7	1687.7	1687.7	1683.8	1675.9	1671.9	1667.9	1660.0	1648.1	1636.2	1620.4
20°	1652.1	1652.1	1648.1	1644.2	1636.2	1636.2	1632.3	1620.4	1608.5	1592.7	1576.8
22.5°	1608.5	1608.5	1604.5	1600.6	1592.7	1588.7	1584.7	1572.8	1561.0	1545.1	1529.3
25°	1557.0	1553.0	1549.1	1545.1	1541.2	1533.2	1529.3	1521.3	1509.5	1489.7	1473.8
27.5°	1489.7	1489.7	1485.7	1481.7	1477.8	1473.8	1469.8	1458.0	1446.1	1426.3	1410.4
30°	1422.3	1422.3	1418.3	1414.4	1410.4	1406.5	1398.5	1386.6	1378.7	1362.9	1343.1
32.5°	1351.0	1347.0	1347.0	1347.0	1339.1	1339.1	1331.2	1319.3	1303.4	1291.6	1275.7
35°	1220.2	1224.2	1228.2	1240.1	1244.0	1251.9	1251.9	1248.0	1232.1	1216.3	1196.5
37.5°	1097.4	1089.5	1101.4	1109.3	1125.2	1133.1	1137.0	1152.9	1160.8	1141.0	1121.2
40°	958.8	966.7	974.6	986.5	1002.3	1006.3	1018.2	1030.1	1049.9	1057.8	1045.9
42.5°	839.9	839.9	851.8	863.7	875.6	887.5	899.3	915.2	939.0	950.8	954.8
45°	736.9	732.9	736.9	752.7	768.6	776.5	784.4	804.3	828.0	843.9	839.9
47.5°	637.9	641.8	649.7	657.7	665.6	673.5	681.4	705.2	721.1	725.0	721.1
50°	562.6	558.6	566.5	570.5	582.4	586.4	594.3	606.2	618.0	622.0	622.0
52.5°	491.3	495.2	495.2	499.2	507.1	511.1	515.0	526.9	526.9	530.9	526.9
55°	435.8	431.8	435.8	439.8	443.7	447.7	451.6	451.6	451.6	451.6	447.7
57.5°	380.3	380.3	384.3	384.3	388.3	392.2	392.2	388.3	388.3	380.3	376.4
60°	336.8	336.8	336.8	336.8	340.7	340.7	340.7	332.8	324.9	324.9	313.0
62.5°	297.1	293.2	297.1	297.1	297.1	293.2	289.2	281.3	277.3	269.4	261.5
65°	257.5	257.5	257.5	257.5	253.6	253.6	249.6	241.7	233.7	229.8	217.9
67.5°	221.9	221.9	221.9	221.9	217.9	213.9	210.0	202.1	194.1	190.2	178.3
70°	190.2	186.2	186.2	186.2	182.2	178.3	174.3	170.4	162.4	154.5	146.6
72.5°	158.5	158.5	154.5	154.5	150.5	146.6	142.6	138.7	130.7	122.8	114.9
75°	126.8	126.8	126.8	122.8	118.9	118.9	114.9	107.0	103.0	95.1	91.1
77.5°	103.0	99.0	99.0	95.1	91.1	91.1	87.2	83.2	79.2	75.3	67.4
80°	75.3	75.3	75.3	71.3	67.4	67.4	63.4	59.4	55.5	51.5	47.5
82.5°	51.5	51.5	51.5	47.5	47.5	43.6	43.6	39.6	39.6	35.7	31.7
85°	27.7	27.7	27.7	27.7	27.7	23.8	23.8	23.8	19.8	19.8	15.8
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	4.0	4.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9
2.5°	1691.7	1691.7	1687.7	1683.8	1683.8	1679.8	1675.9	1675.9	1671.9	1667.9	1664.0
5°	1699.6	1695.7	1687.7	1683.8	1679.8	1679.8	1671.9	1664.0	1660.0	1656.0	1648.1
7.5°	1699.6	1691.7	1683.8	1675.9	1671.9	1667.9	1656.0	1648.1	1640.2	1628.3	1620.4
10°	1691.7	1679.8	1667.9	1656.0	1652.1	1644.2	1632.3	1624.4	1608.5	1596.6	1584.7
12.5°	1671.9	1660.0	1644.2	1628.3	1620.4	1612.5	1596.6	1584.7	1568.9	1557.0	1541.2
15°	1644.2	1628.3	1612.5	1596.6	1584.7	1580.8	1561.0	1541.2	1525.3	1505.5	1485.7
17.5°	1604.5	1588.7	1568.9	1553.0	1541.2	1533.2	1509.5	1489.7	1469.8	1450.0	1430.2
20°	1561.0	1541.2	1521.3	1497.6	1489.7	1477.8	1454.0	1430.2	1406.5	1386.6	1362.9
22.5°	1509.5	1489.7	1465.9	1446.1	1430.2	1418.3	1394.6	1366.8	1343.1	1319.3	1295.5
25°	1450.0	1430.2	1406.5	1382.7	1366.8	1354.9	1327.2	1299.5	1275.7	1248.0	1224.2
27.5°	1390.6	1366.8	1343.1	1311.4	1299.5	1283.6	1255.9	1228.2	1200.4	1172.7	1145.0
30°	1323.3	1295.5	1271.8	1240.1	1228.2	1212.3	1180.6	1152.9	1125.2	1097.4	1065.7
32.5°	1251.9	1224.2	1196.5	1168.7	1152.9	1137.0	1109.3	1077.6	1042.0	1014.2	990.5
35°	1172.7	1148.9	1121.2	1089.5	1069.7	1053.8	1014.2	982.5	946.9	923.1	895.4
37.5°	1101.4	1069.7	1034.0	994.4	974.6	954.8	915.2	883.5	855.8	824.1	800.3
40°	1014.2	978.6	939.0	891.4	879.5	859.7	824.1	788.4	760.7	732.9	709.2
42.5°	919.1	879.5	843.9	804.3	784.4	764.6	729.0	693.3	665.6	641.8	618.0
45°	824.1	788.4	748.8	709.2	689.4	673.5	637.9	606.2	582.4	558.6	538.8
47.5°	717.1	693.3	657.7	622.0	598.2	582.4	554.7	526.9	499.2	475.4	463.5
50°	614.1	598.2	570.5	534.8	519.0	503.2	471.5	447.7	427.9	408.1	392.2
52.5°	519.0	507.1	487.3	455.6	443.7	423.9	400.1	380.3	360.5	344.7	332.8
55°	439.8	423.9	408.1	388.3	372.4	364.5	336.8	320.9	305.1	289.2	277.3
57.5°	364.5	356.6	340.7	324.9	313.0	301.1	281.3	265.4	253.6	237.7	229.8
60°	309.0	293.2	281.3	265.4	257.5	249.6	233.7	217.9	206.0	194.1	186.2
62.5°	253.6	241.7	229.8	213.9	210.0	202.1	190.2	174.3	166.4	154.5	146.6
65°	210.0	198.1	190.2	174.3	170.4	162.4	150.5	138.7	130.7	122.8	114.9
67.5°	170.4	162.4	150.5	138.7	134.7	126.8	114.9	107.0	99.0	91.1	87.2
70°	138.7	130.7	118.9	107.0	103.0	99.0	87.2	83.2	75.3	67.4	63.4
72.5°	110.9	103.0	91.1	83.2	79.2	75.3	67.4	59.4	55.5	47.5	43.6
75°	83.2	75.3	67.4	59.4	55.5	55.5	47.5	43.6	39.6	31.7	27.7
77.5°	63.4	55.5	47.5	43.6	39.6	35.7	31.7	27.7	23.8	19.8	15.8
80°	43.6	39.6	31.7	27.7	27.7	23.8	19.8	19.8	15.8	11.9	7.9
82.5°	27.7	23.8	19.8	15.8	15.8	15.8	11.9	7.9	7.9	7.9	4.0
85°	11.9	11.9	7.9	7.9	7.9	7.9	4.0	4.0	4.0	0.0	0.0
87.5°	4.0	4.0	0.0	4.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9
2.5°	1664.0	1660.0	1656.0	1656.0	1652.1	1652.1	1648.1	1648.1	1644.2	1644.2	1640.2
5°	1640.2	1636.2	1628.3	1628.3	1624.4	1620.4	1612.5	1608.5	1604.5	1600.6	1596.6
7.5°	1612.5	1600.6	1592.7	1588.7	1584.7	1576.8	1568.9	1561.0	1553.0	1549.1	1541.2
10°	1568.9	1557.0	1549.1	1545.1	1537.2	1525.3	1517.4	1505.5	1497.6	1489.7	1481.7
12.5°	1525.3	1509.5	1493.6	1489.7	1481.7	1465.9	1458.0	1442.1	1430.2	1422.3	1414.4
15°	1469.8	1454.0	1434.2	1426.3	1422.3	1402.5	1390.6	1378.7	1362.9	1351.0	1343.1
17.5°	1406.5	1390.6	1370.8	1358.9	1351.0	1335.1	1315.3	1303.4	1291.6	1271.8	1263.8
20°	1343.1	1319.3	1299.5	1291.6	1279.7	1259.9	1244.0	1228.2	1208.4	1196.5	1180.6
22.5°	1267.8	1248.0	1224.2	1212.3	1204.4	1180.6	1164.8	1145.0	1129.1	1117.2	1097.4
25°	1200.4	1172.7	1148.9	1137.0	1125.2	1105.4	1081.6	1065.7	1049.9	1034.0	1018.2
27.5°	1121.2	1093.5	1069.7	1061.8	1049.9	1022.2	1006.3	982.5	962.7	950.8	935.0
30°	1042.0	1014.2	990.5	978.6	966.7	942.9	923.1	903.3	887.5	871.6	855.8
32.5°	962.7	939.0	915.2	903.3	891.4	867.6	847.8	824.1	808.2	788.4	772.6
35°	871.6	847.8	828.0	816.1	808.2	788.4	768.6	748.8	732.9	713.1	697.3
37.5°	776.5	752.7	740.9	729.0	721.1	705.2	689.4	673.5	657.7	641.8	622.0
40°	685.4	673.5	649.7	645.8	637.9	622.0	610.1	594.3	582.4	566.5	550.7
42.5°	602.2	582.4	566.5	562.6	554.7	542.8	530.9	519.0	511.1	495.2	483.3
45°	523.0	507.1	491.3	483.3	479.4	467.5	455.6	447.7	439.8	427.9	416.0
47.5°	447.7	431.8	420.0	416.0	408.1	400.1	388.3	380.3	368.5	360.5	348.6
50°	380.3	368.5	356.6	352.6	344.7	340.7	328.8	320.9	309.0	297.1	289.2
52.5°	320.9	309.0	301.1	297.1	293.2	281.3	273.4	265.4	253.6	245.6	233.7
55°	265.4	257.5	249.6	245.6	241.7	233.7	225.8	213.9	206.0	194.1	182.2
57.5°	217.9	210.0	202.1	198.1	194.1	186.2	178.3	170.4	158.5	146.6	134.7
60°	174.3	170.4	162.4	158.5	154.5	146.6	138.7	126.8	118.9	103.0	95.1
62.5°	138.7	134.7	126.8	122.8	118.9	107.0	99.0	91.1	79.2	67.4	55.5
65°	107.0	99.0	91.1	91.1	87.2	79.2	67.4	55.5	47.5	35.7	23.8
67.5°	79.2	71.3	63.4	63.4	59.4	51.5	39.6	31.7	19.8	11.9	0.0
70°	55.5	51.5	43.6	39.6	35.7	27.7	19.8	11.9	4.0	0.0	0.0
72.5°	39.6	31.7	27.7	23.8	19.8	11.9	4.0	0.0	0.0	0.0	0.0
75°	23.8	19.8	11.9	11.9	7.9	4.0	0.0	0.0	0.0	0.0	0.0
77.5°	11.9	11.9	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	7.9	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	4.0	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: P238377

CATALOG NUMBER: PRS640D010-S6M24-61SWWMB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9	1675.9
2.5°	1640.2	1636.2	1636.2	1636.2	1636.2	1636.2	1632.3	1632.3
5°	1592.7	1588.7	1588.7	1584.7	1584.7	1584.7	1580.8	1580.8
7.5°	1537.2	1533.2	1529.3	1529.3	1525.3	1525.3	1521.3	1525.3
10°	1473.8	1465.9	1465.9	1465.9	1461.9	1458.0	1458.0	1458.0
12.5°	1406.5	1398.5	1394.6	1390.6	1386.6	1386.6	1382.7	1382.7
15°	1331.2	1323.3	1319.3	1315.3	1311.4	1307.4	1303.4	1307.4
17.5°	1251.9	1244.0	1240.1	1236.1	1228.2	1228.2	1224.2	1220.2
20°	1168.7	1160.8	1156.9	1152.9	1148.9	1145.0	1141.0	1137.0
22.5°	1085.5	1081.6	1069.7	1069.7	1061.8	1057.8	1053.8	1053.8
25°	1002.3	994.4	990.5	982.5	974.6	970.7	970.7	970.7
27.5°	919.1	911.2	903.3	899.3	895.4	891.4	883.5	883.5
30°	839.9	828.0	820.1	820.1	812.2	804.3	804.3	800.3
32.5°	760.7	748.8	740.9	736.9	732.9	725.0	721.1	721.1
35°	681.4	669.6	665.6	657.7	649.7	649.7	637.9	641.8
37.5°	610.1	594.3	590.3	586.4	574.5	570.5	566.5	570.5
40°	534.8	523.0	515.0	511.1	503.2	495.2	491.3	491.3
42.5°	463.5	455.6	447.7	443.7	431.8	423.9	420.0	423.9
45°	400.1	388.3	384.3	376.4	364.5	356.6	352.6	352.6
47.5°	336.8	328.8	316.9	313.0	301.1	293.2	285.3	285.3
50°	277.3	265.4	257.5	249.6	241.7	229.8	221.9	225.8
52.5°	221.9	206.0	202.1	194.1	182.2	170.4	162.4	162.4
55°	170.4	158.5	150.5	146.6	130.7	118.9	110.9	107.0
57.5°	122.8	110.9	107.0	99.0	87.2	75.3	63.4	63.4
60°	83.2	71.3	63.4	59.4	47.5	39.6	27.7	23.8
62.5°	43.6	35.7	27.7	23.8	15.8	7.9	7.9	4.0
65°	11.9	4.0	4.0	4.0	4.0	4.0	4.0	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)