

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: P241996

Luminaire Tested: **PRS430D010-S4M24-41SWWC-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241996  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-61)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS430D010-S4M24-41SWWC-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM SPECULAR  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1477.4 lumens  
Efficiency: N/A  
Efficacy: 59.1 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.9 / 0.99  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

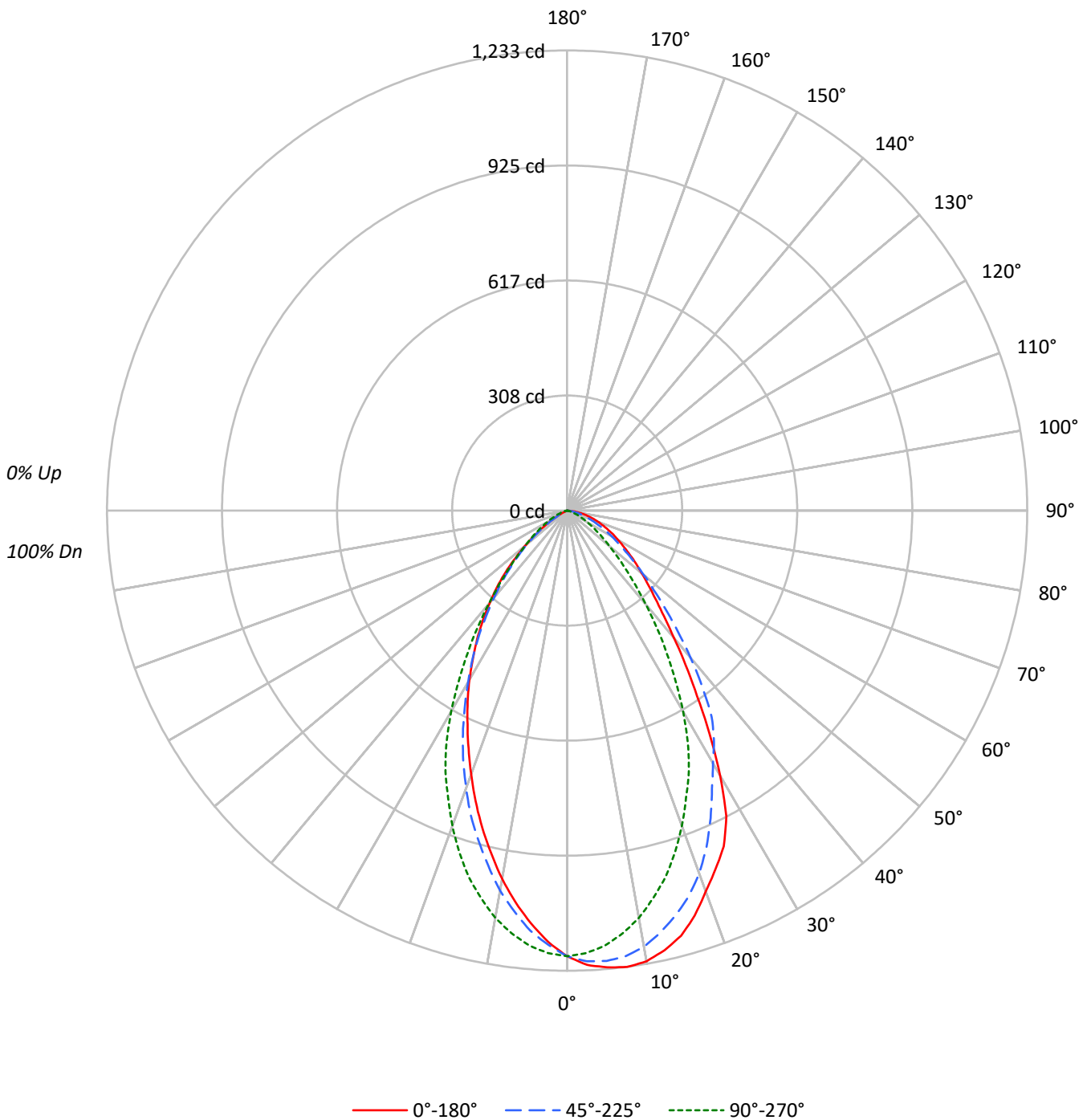
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	100		
1	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	92	91	91	91	91	91	91	91		
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81	81	81	81	81	81	81		
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73	73	73	73	73	73	73		
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66	66	66	66	66	66	66		
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60	60	60	60	60	60	60		
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55	55	55	55	55	55	55		
7	76	65	58	53	74	64	58	53	63	57	52	62	56	52	60	55	52	50	50	50	50	50	50	50		
8	72	60	53	49	70	60	53	48	59	53	48	58	52	48	56	51	48	46	46	46	46	46	46	46		
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43	43	43	43	43	43	43		
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40	40	40	40	40	40	40		

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

	0°	90°	180°
0°	91400	91400	91400
5°	94393	89859	85326
10°	95290	86126	77911
15°	93452	80607	69703
20°	88461	73245	61238
25°	83831	65158	53326
30°	72528	54940	46252
35°	56710	43395	39255
40°	44435	32654	32164
45°	36166	23934	25265
50°	31009	17552	17552
55°	27210	13118	10489
60°	24065	9400	4883
65°	21806	6683	887
70°	19784	4409	0
75°	17449	2898	0
80°	14061	1102	0
85°	8607	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.8	7.4
10°-20°	285.4	19.3
20°-30°	360.3	24.4
30°-40°	319.4	21.6
40°-50°	211.9	14.3
50°-60°	115.3	7.8
60°-70°	51.8	3.5
70°-80°	20.1	1.4
80°-90°	3.4	0.2
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°	755.5	51.1
0°-40°	1074.8	72.8
0°-60°	1402.1	94.9
0°-90°	1477.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1477.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1194	1194	1194	1194	1194	
5°	1228	1211	1170	1130	1110	117
15°	1179	1123	1017	916	880	330
25°	993	909	772	661	631	449
35°	607	676	464	415	420	383
45°	334	371	221	214	233	262
55°	204	192	98	76	79	184
65°	120	93	37	2	5	120
75°	59	37	10	0	0	63
85°	10	5	0	0	0	13
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°	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1218.6	1216.2	1216.2	1216.2	1213.7	1213.7	1213.7	1213.7	1211.3	1208.8	1208.8
5°	1228.5	1230.9	1228.5	1226.0	1226.0	1226.0	1223.6	1221.1	1218.6	1216.2	1211.3
7.5°	1233.4	1230.9	1230.9	1228.5	1226.0	1223.6	1221.1	1218.6	1213.7	1208.8	1203.9
10°	1226.0	1223.6	1221.1	1221.1	1213.7	1213.7	1211.3	1206.4	1199.0	1194.1	1186.7
12.5°	1206.4	1206.4	1203.9	1201.4	1194.1	1194.1	1189.2	1184.2	1176.9	1167.0	1157.2
15°	1179.3	1179.3	1174.4	1172.0	1167.0	1164.6	1159.7	1152.3	1144.9	1135.1	1122.8
17.5°	1137.6	1137.6	1135.1	1130.2	1127.7	1125.3	1117.9	1113.0	1103.2	1093.3	1083.5
20°	1086.0	1081.1	1081.1	1078.6	1073.7	1071.2	1068.8	1061.4	1054.0	1044.2	1034.4
22.5°	1039.3	1036.8	1029.5	1024.5	1017.2	1012.3	1009.8	1000.0	995.1	987.7	975.4
25°	992.6	987.7	985.2	977.9	968.0	965.6	958.2	943.5	933.6	921.4	909.1
27.5°	923.8	923.8	926.3	923.8	914.0	911.5	906.6	894.3	874.7	855.0	840.3
30°	820.6	818.2	820.6	825.5	832.9	835.4	840.3	837.8	823.1	801.0	781.3
32.5°	710.1	710.1	719.9	727.3	734.6	737.1	742.0	754.3	754.3	746.9	732.2
35°	606.9	611.8	619.1	626.5	636.3	638.8	651.1	653.5	668.3	678.1	675.7
37.5°	520.9	525.8	528.2	535.6	545.4	547.9	552.8	570.0	587.2	599.5	594.6
40°	444.7	444.7	452.1	459.4	469.3	471.7	479.1	488.9	508.6	513.5	513.5
42.5°	383.3	385.7	388.2	393.1	400.5	405.4	410.3	425.1	434.9	442.2	437.3
45°	334.1	336.6	339.1	344.0	348.9	351.3	356.3	366.1	373.5	373.5	371.0
47.5°	294.8	294.8	297.3	299.7	304.7	307.1	312.0	316.9	319.4	316.9	314.5
50°	260.4	262.9	262.9	265.3	267.8	272.7	275.2	275.2	275.2	272.7	267.8
52.5°	231.0	231.0	233.4	233.4	238.3	240.8	240.8	240.8	238.3	233.4	226.0
55°	203.9	203.9	203.9	206.4	211.3	211.3	211.3	208.8	206.4	199.0	191.6
57.5°	179.4	181.8	181.8	181.8	184.3	184.3	184.3	181.8	176.9	169.5	162.2
60°	157.2	159.7	159.7	159.7	162.2	162.2	159.7	157.2	152.3	142.5	137.6
62.5°	140.0	140.0	140.0	140.0	140.0	140.0	137.6	132.7	127.8	120.4	115.5
65°	120.4	120.4	120.4	122.8	120.4	117.9	117.9	113.0	108.1	100.7	93.4
67.5°	103.2	103.2	103.2	103.2	100.7	100.7	98.3	93.4	88.4	83.5	76.2
70°	88.4	88.4	88.4	86.0	83.5	83.5	81.1	76.2	71.3	66.3	61.4
72.5°	73.7	73.7	73.7	71.3	68.8	66.3	66.3	61.4	56.5	51.6	49.1
75°	59.0	59.0	59.0	56.5	54.1	51.6	51.6	46.7	44.2	41.8	36.9
77.5°	46.7	46.7	44.2	41.8	41.8	39.3	39.3	36.9	34.4	29.5	27.0
80°	31.9	31.9	31.9	31.9	29.5	27.0	27.0	24.6	22.1	19.7	17.2
82.5°	22.1	22.1	19.7	19.7	17.2	17.2	17.2	14.7	14.7	12.3	9.8
85°	9.8	9.8	9.8	9.8	7.4	7.4	7.4	7.4	7.4	4.9	4.9
87.5°	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1206.4	1203.9	1203.9	1199.0	1199.0	1196.5	1194.1	1191.6	1189.2	1186.7	1184.2
5°	1208.8	1203.9	1199.0	1194.1	1194.1	1189.2	1184.2	1179.3	1176.9	1169.5	1164.6
7.5°	1199.0	1191.6	1186.7	1179.3	1176.9	1172.0	1164.6	1157.2	1149.8	1142.5	1135.1
10°	1179.3	1169.5	1162.1	1154.8	1147.4	1144.9	1135.1	1127.7	1115.5	1108.1	1100.7
12.5°	1149.8	1140.0	1130.2	1117.9	1115.5	1110.5	1098.3	1086.0	1076.1	1063.9	1054.0
15°	1113.0	1103.2	1088.4	1078.6	1071.2	1063.9	1054.0	1041.7	1027.0	1017.2	1004.9
17.5°	1071.2	1056.5	1041.7	1029.5	1019.6	1014.7	997.5	982.8	972.9	960.7	948.4
20°	1022.1	1004.9	987.7	970.5	963.1	953.3	938.6	923.8	909.1	899.2	882.0
22.5°	963.1	945.9	928.7	909.1	904.2	894.3	877.1	862.4	850.1	832.9	818.2
25°	896.8	882.0	869.8	852.6	842.7	832.9	818.2	801.0	783.8	771.5	754.3
27.5°	830.4	820.6	808.3	791.1	781.3	771.5	751.8	734.6	712.5	700.2	680.6
30°	766.6	759.2	742.0	724.8	707.6	700.2	673.2	653.5	633.9	621.6	606.9
32.5°	710.1	687.9	665.8	641.3	631.4	621.6	594.6	574.9	557.7	540.5	525.8
35°	646.2	611.8	587.2	565.1	552.8	543.0	520.9	498.8	484.0	464.4	454.5
37.5°	577.4	547.9	518.4	491.4	481.6	466.8	449.6	425.1	410.3	393.1	378.4
40°	503.7	484.0	452.1	425.1	412.8	402.9	380.8	361.2	341.5	326.8	316.9
42.5°	427.5	415.2	390.7	363.6	351.3	341.5	321.9	299.7	282.5	270.3	258.0
45°	363.6	353.8	334.1	309.6	294.8	285.0	265.3	245.7	231.0	221.1	213.8
47.5°	307.1	297.3	280.1	258.0	245.7	235.9	216.2	199.0	189.2	181.8	176.9
50°	258.0	245.7	231.0	216.2	203.9	194.1	176.9	164.6	154.8	147.4	145.0
52.5°	216.2	206.4	191.6	176.9	167.1	159.7	142.5	132.7	127.8	120.4	115.5
55°	181.8	172.0	159.7	145.0	137.6	130.2	117.9	110.6	103.2	98.3	93.4
57.5°	152.3	142.5	130.2	117.9	110.6	105.6	95.8	88.4	83.5	78.6	73.7
60°	127.8	117.9	108.1	95.8	90.9	86.0	78.6	71.3	66.3	61.4	56.5
62.5°	105.6	95.8	86.0	76.2	73.7	68.8	63.9	56.5	51.6	49.1	44.2
65°	88.4	78.6	68.8	61.4	59.0	54.1	49.1	44.2	39.3	36.9	34.4
67.5°	71.3	61.4	54.1	49.1	46.7	44.2	39.3	34.4	31.9	27.0	24.6
70°	56.5	49.1	41.8	36.9	34.4	31.9	29.5	27.0	22.1	19.7	17.2
72.5°	41.8	36.9	31.9	27.0	27.0	24.6	22.1	19.7	17.2	14.7	12.3
75°	31.9	27.0	24.6	19.7	19.7	17.2	14.7	12.3	9.8	9.8	7.4
77.5°	22.1	19.7	17.2	14.7	12.3	12.3	9.8	7.4	7.4	4.9	4.9
80°	14.7	12.3	9.8	7.4	7.4	7.4	4.9	4.9	4.9	2.5	2.5
82.5°	9.8	7.4	4.9	4.9	4.9	2.5	2.5	2.5	2.5	2.5	0.0
85°	2.5	2.5	2.5	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1181.8	1179.3	1176.9	1174.4	1174.4	1169.5	1169.5	1167.0	1164.6	1164.6	1162.1
5°	1159.7	1154.8	1149.8	1147.4	1147.4	1140.0	1135.1	1132.6	1130.2	1127.7	1122.8
7.5°	1127.7	1122.8	1115.5	1110.5	1108.1	1100.7	1095.8	1088.4	1083.5	1081.1	1073.7
10°	1090.9	1083.5	1071.2	1068.8	1063.9	1056.5	1049.1	1041.7	1034.4	1027.0	1022.1
12.5°	1044.2	1031.9	1024.5	1017.2	1012.3	1004.9	992.6	982.8	975.4	970.5	963.1
15°	992.6	980.3	970.5	963.1	958.2	948.4	933.6	926.3	916.4	906.6	904.2
17.5°	933.6	918.9	909.1	901.7	894.3	887.0	872.2	864.8	857.5	847.6	840.3
20°	869.8	855.0	845.2	835.4	828.0	820.6	810.8	798.5	791.1	786.2	776.4
22.5°	803.4	791.1	776.4	771.5	766.6	749.4	742.0	732.2	727.3	719.9	715.0
25°	739.5	722.3	712.5	705.1	697.8	685.5	673.2	665.8	660.9	656.0	648.6
27.5°	668.3	658.5	646.2	636.3	633.9	621.6	609.3	602.0	594.6	589.7	582.3
30°	592.1	579.8	570.0	570.0	565.1	555.3	550.4	540.5	530.7	528.2	525.8
32.5°	513.5	506.1	498.8	493.8	493.8	486.5	479.1	476.6	471.7	466.8	466.8
35°	442.2	434.9	427.5	425.1	425.1	420.1	417.7	415.2	415.2	412.8	410.3
37.5°	373.5	363.6	356.3	356.3	356.3	356.3	356.3	356.3	356.3	361.2	358.7
40°	309.6	304.7	302.2	299.7	299.7	299.7	302.2	302.2	304.7	309.6	312.0
42.5°	253.1	253.1	250.6	250.6	248.2	250.6	253.1	255.5	258.0	258.0	262.9
45°	211.3	208.8	206.4	206.4	208.8	206.4	208.8	213.8	213.8	216.2	218.7
47.5°	172.0	169.5	169.5	169.5	169.5	169.5	169.5	172.0	174.4	174.4	176.9
50°	140.0	137.6	135.1	137.6	135.1	135.1	137.6	137.6	137.6	140.0	140.0
52.5°	110.6	108.1	105.6	105.6	105.6	105.6	105.6	105.6	105.6	105.6	105.6
55°	86.0	83.5	81.1	81.1	78.6	78.6	76.2	76.2	76.2	76.2	76.2
57.5°	68.8	63.9	61.4	59.0	59.0	54.1	51.6	51.6	49.1	49.1	49.1
60°	51.6	49.1	44.2	44.2	41.8	36.9	34.4	29.5	29.5	27.0	27.0
62.5°	39.3	36.9	34.4	31.9	29.5	24.6	19.7	14.7	9.8	9.8	12.3
65°	29.5	27.0	22.1	19.7	19.7	14.7	9.8	4.9	2.5	2.5	4.9
67.5°	22.1	19.7	14.7	12.3	9.8	7.4	2.5	0.0	0.0	0.0	0.0
70°	14.7	12.3	7.4	7.4	4.9	2.5	0.0	0.0	0.0	0.0	0.0
72.5°	9.8	7.4	4.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	4.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.5	0.0	0.0	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	0.0	0.0	0.0
82.5°	0.0	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: P241996

CATALOG NUMBER: PRS430D010-S4M24-41SWWC-3000K

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1159.7	1159.7	1159.7	1159.7	1157.2	1157.2	1157.2	1157.2
5°	1122.8	1115.5	1115.5	1115.5	1115.5	1115.5	1113.0	1110.5
7.5°	1071.2	1066.3	1066.3	1063.9	1063.9	1061.4	1061.4	1058.9
10°	1017.2	1012.3	1012.3	1007.3	1007.3	1004.9	1002.4	1002.4
12.5°	955.7	950.8	950.8	950.8	945.9	945.9	941.0	941.0
15°	894.3	889.4	887.0	887.0	882.0	882.0	879.6	879.6
17.5°	830.4	828.0	823.1	823.1	820.6	815.7	815.7	815.7
20°	771.5	764.1	761.7	761.7	754.3	754.3	751.8	751.8
22.5°	707.6	702.7	700.2	697.8	692.9	695.3	690.4	690.4
25°	643.7	643.7	638.8	638.8	636.3	633.9	631.4	631.4
27.5°	582.3	582.3	579.8	579.8	577.4	574.9	574.9	577.4
30°	523.3	523.3	523.3	525.8	523.3	520.9	523.3	523.3
32.5°	466.8	466.8	469.3	466.8	469.3	469.3	469.3	469.3
35°	412.8	412.8	415.2	415.2	417.7	417.7	420.1	420.1
37.5°	358.7	363.6	363.6	363.6	368.5	368.5	371.0	371.0
40°	312.0	312.0	314.5	316.9	319.4	321.9	324.3	321.9
42.5°	265.3	265.3	267.8	270.3	272.7	275.2	277.6	277.6
45°	218.7	221.1	223.6	223.6	228.5	231.0	231.0	233.4
47.5°	176.9	181.8	181.8	181.8	184.3	186.7	189.2	186.7
50°	140.0	142.5	142.5	142.5	145.0	147.4	147.4	147.4
52.5°	105.6	108.1	108.1	108.1	110.6	110.6	110.6	113.0
55°	76.2	76.2	76.2	78.6	78.6	78.6	78.6	78.6
57.5°	49.1	49.1	49.1	51.6	54.1	54.1	51.6	51.6
60°	27.0	29.5	31.9	31.9	31.9	34.4	31.9	31.9
62.5°	14.7	17.2	17.2	17.2	17.2	17.2	17.2	17.2
65°	4.9	7.4	7.4	7.4	7.4	7.4	4.9	4.9
67.5°	2.5	2.5	2.5	2.5	2.5	0.0	2.5	2.5
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)