

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: P242051

Luminaire Tested: **PRS430D010-S4M24-41SWWMB-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242051  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-64)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS430D010-S4M24-41SWWMB-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" 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: 1184.1 lumens  
Efficiency: N/A  
Efficacy: 47.4 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.94 / 1.03  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

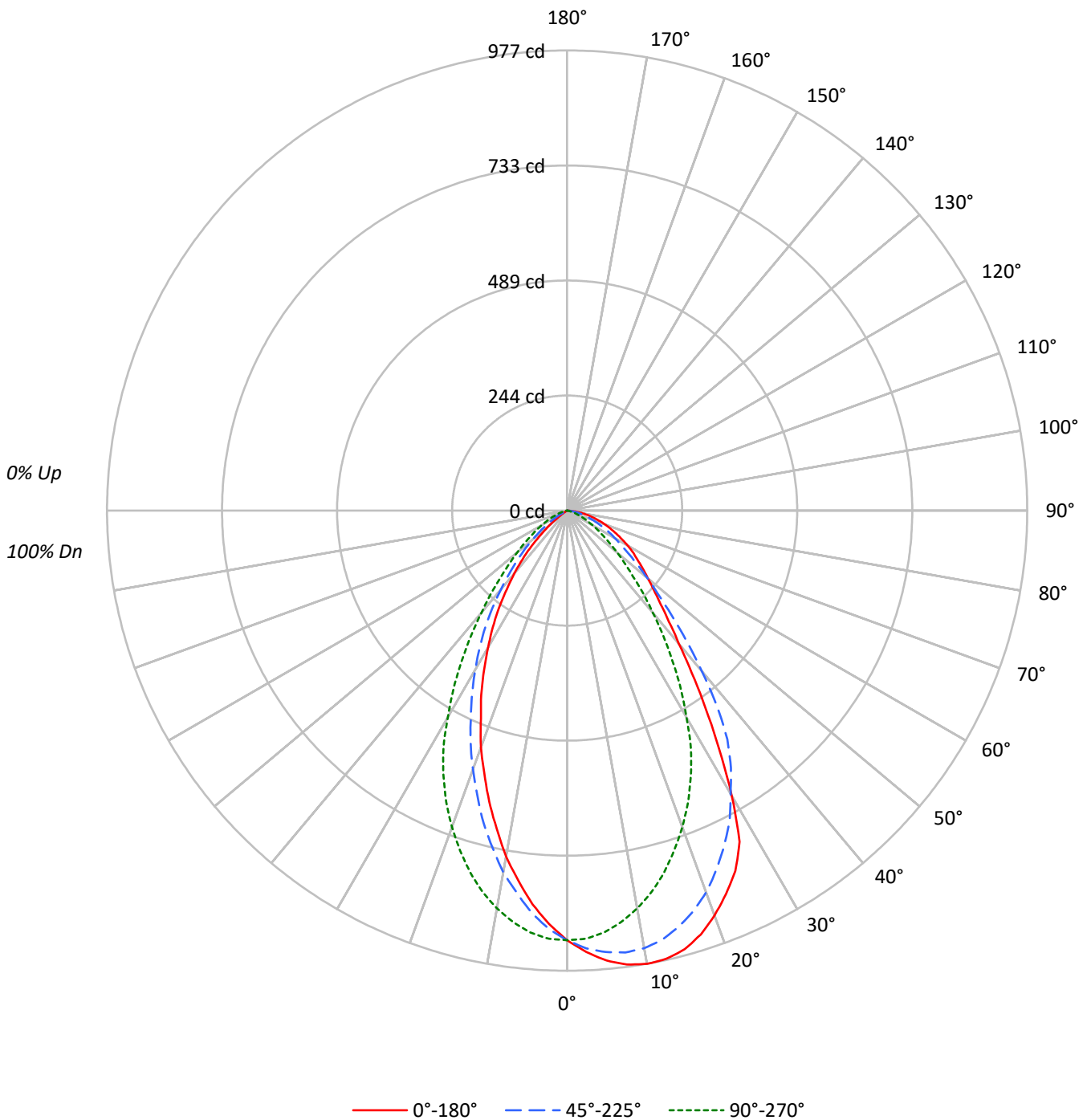
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90					90			
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	88	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	91	82	75	70	89	81	75	70	79	73	69	77	72	68	75	71	67	65					65			
5	86	75	68	63	84	74	68	63	73	67	62	71	66	62	69	65	61	59					59			
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54					54			
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50					50			
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46					46			
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42					42			
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39					39			

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

	0°	90°	180°
0°	69831	69831	69831
5°	73693	69098	64504
10°	75960	66664	57982
15°	76415	63030	50668
20°	74524	58225	43611
25°	71340	52464	36443
30°	61799	44793	29635
35°	47842	36433	23557
40°	36881	28307	17396
45°	30385	21379	11539
50°	26614	16409	5883
55°	24274	12491	1388
60°	22687	9553	398
65°	20720	7064	0
70°	19202	4655	0
75°	16916	3076	0
80°	14899	1146	0
85°	9134	0	0



TEST NUMBER: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.6	7.1
10°-20°	223.7	18.9
20°-30°	289.1	24.4
30°-40°	256.8	21.7
40°-50°	167.0	14.1
50°-60°	92.8	7.8
60°-70°	46.9	4.0
70°-80°	19.7	1.7
80°-90°	3.5	0.3
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°	597.4	50.5
0°-40°	854.2	72.1
0°-60°	1113.9	94.1
0°-90°	1184.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1184.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	912	912	912	912	912	
5°	959	941	899	858	840	92
15°	964	915	795	686	639	270
25°	845	788	621	484	432	382
35°	512	593	390	304	252	323
45°	281	312	198	151	107	220
55°	182	159	94	55	10	165
65°	114	83	39	3	0	114
75°	57	36	10	0	0	61
85°	10	5	0	0	0	13
90°	0	0	0	0	0	



TEST NUMBER: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3
2.5°	938.3	935.7	938.3	935.7	935.7	935.7	935.7	933.1	933.1	930.5	930.5
5°	959.1	959.1	956.5	956.5	953.9	953.9	953.9	951.3	948.7	946.1	940.9
7.5°	972.1	972.1	969.5	969.5	966.9	964.3	964.3	959.1	956.5	951.3	946.1
10°	977.3	977.3	974.7	972.1	969.5	966.9	966.9	961.7	956.5	948.7	943.5
12.5°	974.7	974.7	972.1	969.5	966.9	964.3	961.7	956.5	948.7	940.9	933.1
15°	964.3	964.3	961.7	959.1	953.9	951.3	948.7	943.5	935.7	925.3	914.9
17.5°	943.5	943.5	940.9	938.3	935.7	933.1	927.9	922.7	912.3	901.9	891.5
20°	914.9	914.9	914.9	912.3	907.1	904.5	901.9	894.1	886.3	875.9	862.9
22.5°	881.1	881.1	878.5	875.9	870.7	870.7	865.5	857.7	849.9	839.5	826.6
25°	844.7	842.1	839.5	839.5	831.8	829.2	826.6	818.8	811.0	800.6	787.6
27.5°	792.8	790.2	792.8	792.8	790.2	787.6	785.0	777.2	764.2	753.8	746.0
30°	699.2	701.8	701.8	707.0	717.4	725.2	730.4	730.4	720.0	709.6	694.0
32.5°	600.4	605.6	608.2	618.6	629.0	636.8	642.0	652.4	665.4	662.8	647.2
35°	512.0	517.2	519.8	527.6	540.6	545.8	553.6	569.2	584.8	597.8	592.6
37.5°	434.1	434.1	441.9	449.7	460.1	467.9	475.7	488.7	509.4	519.8	522.4
40°	369.1	371.7	374.3	384.7	392.5	400.3	405.5	418.5	436.7	444.5	444.5
42.5°	319.7	319.7	322.3	327.5	337.9	340.5	345.7	356.1	366.5	371.7	374.3
45°	280.7	280.7	280.7	285.9	291.1	293.7	298.9	306.7	309.3	311.9	311.9
47.5°	249.5	249.5	249.5	252.1	254.7	257.3	259.9	262.5	265.1	265.1	259.9
50°	223.5	223.5	226.1	226.1	226.1	228.7	228.7	228.7	226.1	223.5	220.9
52.5°	202.7	202.7	202.7	202.7	202.7	202.7	202.7	200.1	194.9	192.3	187.1
55°	181.9	184.5	184.5	184.5	181.9	181.9	179.3	176.7	168.9	163.8	158.6
57.5°	166.4	166.4	166.4	163.8	163.8	161.2	158.6	153.4	148.2	143.0	135.2
60°	148.2	148.2	148.2	145.6	145.6	143.0	140.4	135.2	130.0	122.2	117.0
62.5°	130.0	130.0	130.0	130.0	127.4	124.8	122.2	117.0	111.8	106.6	101.4
65°	114.4	114.4	114.4	114.4	109.2	106.6	104.0	98.8	93.6	88.4	83.2
67.5°	98.8	98.8	98.8	96.2	93.6	91.0	88.4	85.8	80.6	75.4	70.2
70°	85.8	85.8	83.2	80.6	78.0	78.0	75.4	70.2	67.6	62.4	57.2
72.5°	70.2	70.2	70.2	67.6	65.0	62.4	59.8	57.2	54.6	49.4	46.8
75°	57.2	57.2	57.2	54.6	52.0	49.4	49.4	44.2	41.6	39.0	36.4
77.5°	44.2	44.2	44.2	41.6	39.0	39.0	36.4	33.8	31.2	28.6	26.0
80°	33.8	33.8	31.2	31.2	28.6	28.6	26.0	26.0	23.4	20.8	18.2
82.5°	20.8	20.8	20.8	20.8	18.2	18.2	18.2	15.6	15.6	13.0	10.4
85°	10.4	10.4	10.4	10.4	7.8	7.8	7.8	7.8	7.8	5.2	5.2
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: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3
2.5°	927.9	925.3	922.7	920.1	920.1	917.5	917.5	914.9	912.3	909.7	907.1
5°	938.3	933.1	927.9	925.3	922.7	920.1	914.9	909.7	904.5	899.3	894.1
7.5°	938.3	933.1	925.3	920.1	914.9	912.3	904.5	896.7	888.9	881.1	873.3
10°	935.7	925.3	917.5	909.7	901.9	896.7	888.9	878.5	868.1	857.7	847.3
12.5°	922.7	912.3	901.9	891.5	883.7	878.5	865.5	852.5	842.1	829.2	816.2
15°	904.5	894.1	881.1	865.5	860.3	852.5	839.5	824.0	811.0	795.4	782.4
17.5°	881.1	865.5	852.5	836.9	829.2	821.4	805.8	787.6	774.6	756.4	740.8
20°	849.9	836.9	816.2	803.2	792.8	785.0	766.8	748.6	730.4	714.8	694.0
22.5°	813.6	798.0	779.8	761.6	753.8	743.4	725.2	704.4	688.8	670.6	649.8
25°	774.6	756.4	738.2	717.4	709.6	701.8	681.0	662.8	642.0	621.2	605.6
27.5°	727.8	712.2	694.0	673.2	665.4	655.0	631.6	610.8	590.0	569.2	551.0
30°	681.0	668.0	644.6	621.2	608.2	595.2	571.8	548.4	525.0	506.8	491.3
32.5°	634.2	608.2	582.2	556.2	540.6	527.6	506.8	486.1	465.3	449.7	431.5
35°	571.8	545.8	517.2	491.3	478.3	467.9	444.5	423.7	405.5	389.9	374.3
37.5°	506.8	480.9	454.9	428.9	418.5	408.1	384.7	366.5	348.3	335.3	319.7
40°	436.7	423.7	395.1	371.7	361.3	350.9	332.7	311.9	298.9	283.3	270.3
42.5°	371.7	358.7	337.9	317.1	306.7	298.9	280.7	265.1	252.1	239.1	228.7
45°	311.9	301.5	285.9	270.3	259.9	252.1	233.9	220.9	210.5	197.5	189.7
47.5°	259.9	252.1	241.7	226.1	218.3	210.5	194.9	184.5	174.1	166.4	158.6
50°	215.7	210.5	200.1	189.7	181.9	176.7	163.8	153.4	145.6	137.8	132.6
52.5°	181.9	174.1	166.4	156.0	150.8	145.6	137.8	127.4	122.2	114.4	109.2
55°	153.4	148.2	140.4	130.0	124.8	122.2	114.4	106.6	98.8	93.6	88.4
57.5°	130.0	124.8	117.0	109.2	106.6	101.4	93.6	85.8	80.6	78.0	72.8
60°	111.8	104.0	98.8	91.0	85.8	83.2	75.4	70.2	65.0	62.4	57.2
62.5°	93.6	88.4	80.6	72.8	70.2	67.6	62.4	57.2	52.0	49.4	44.2
65°	78.0	72.8	67.6	59.8	57.2	54.6	49.4	44.2	41.6	39.0	36.4
67.5°	65.0	59.8	54.6	49.4	46.8	41.6	39.0	36.4	31.2	28.6	26.0
70°	52.0	46.8	41.6	36.4	36.4	33.8	28.6	26.0	23.4	20.8	18.2
72.5°	41.6	36.4	33.8	28.6	26.0	26.0	23.4	20.8	18.2	15.6	13.0
75°	31.2	28.6	23.4	20.8	18.2	18.2	15.6	13.0	13.0	10.4	7.8
77.5°	23.4	20.8	18.2	15.6	13.0	13.0	10.4	7.8	7.8	5.2	5.2
80°	15.6	13.0	10.4	7.8	7.8	7.8	5.2	5.2	5.2	2.6	2.6
82.5°	7.8	7.8	5.2	5.2	5.2	5.2	2.6	2.6	2.6	2.6	0.0
85°	2.6	2.6	2.6	2.6	2.6	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: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3
2.5°	904.5	901.9	899.3	899.3	896.7	894.1	891.5	891.5	888.9	886.3	886.3
5°	888.9	883.7	878.5	875.9	873.3	868.1	865.5	860.3	857.7	852.5	849.9
7.5°	865.5	857.7	849.9	847.3	844.7	839.5	831.8	824.0	818.8	816.2	811.0
10°	839.5	829.2	818.8	813.6	811.0	800.6	792.8	785.0	779.8	772.0	764.2
12.5°	803.2	792.8	782.4	777.2	772.0	761.6	753.8	743.4	733.0	725.2	717.4
15°	766.8	753.8	740.8	735.6	727.8	717.4	707.0	696.6	686.2	675.8	668.0
17.5°	725.2	712.2	696.6	688.8	683.6	670.6	655.0	647.2	634.2	626.4	616.0
20°	681.0	665.4	649.8	644.6	636.8	621.2	608.2	595.2	584.8	574.4	564.0
22.5°	634.2	616.0	600.4	595.2	587.4	571.8	558.8	548.4	535.4	522.4	512.0
25°	587.4	569.2	553.6	543.2	535.4	522.4	506.8	496.5	483.5	473.1	465.3
27.5°	535.4	517.2	501.6	493.9	488.7	475.7	462.7	449.7	436.7	426.3	415.9
30°	475.7	462.7	449.7	444.5	436.7	426.3	413.3	402.9	389.9	379.5	369.1
32.5°	418.5	405.5	392.5	389.9	384.7	374.3	366.5	356.1	345.7	335.3	327.5
35°	363.9	350.9	343.1	337.9	332.7	324.9	317.1	311.9	304.1	293.7	285.9
37.5°	309.3	304.1	291.1	288.5	285.9	278.1	272.9	267.7	259.9	254.7	246.9
40°	262.5	254.7	246.9	244.3	239.1	233.9	228.7	223.5	218.3	215.7	207.9
42.5°	218.3	213.1	205.3	205.3	200.1	194.9	189.7	187.1	181.9	176.7	174.1
45°	184.5	176.7	174.1	168.9	168.9	163.8	158.6	156.0	150.8	145.6	140.4
47.5°	153.4	148.2	143.0	140.4	140.4	135.2	130.0	124.8	122.2	114.4	109.2
50°	127.4	122.2	119.6	117.0	114.4	111.8	106.6	101.4	96.2	91.0	83.2
52.5°	104.0	101.4	96.2	96.2	93.6	88.4	83.2	78.0	72.8	67.6	59.8
55°	85.8	80.6	78.0	75.4	72.8	70.2	65.0	59.8	54.6	46.8	41.6
57.5°	67.6	65.0	59.8	59.8	57.2	52.0	46.8	41.6	36.4	28.6	23.4
60°	54.6	49.4	46.8	44.2	41.6	39.0	31.2	26.0	20.8	15.6	7.8
62.5°	41.6	39.0	33.8	33.8	31.2	26.0	20.8	15.6	7.8	2.6	0.0
65°	31.2	28.6	26.0	23.4	20.8	15.6	10.4	5.2	2.6	0.0	0.0
67.5°	23.4	20.8	15.6	15.6	13.0	7.8	2.6	0.0	0.0	0.0	0.0
70°	15.6	13.0	10.4	7.8	5.2	2.6	0.0	0.0	0.0	0.0	0.0
72.5°	10.4	7.8	5.2	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.8	5.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.6	2.6	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: P242051

CATALOG NUMBER: PRS430D010-S4M24-41SWWMB-4000K

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	912.3	912.3	912.3	912.3	912.3	912.3	912.3	912.3
2.5°	883.7	881.1	883.7	881.1	881.1	878.5	881.1	878.5
5°	847.3	844.7	844.7	842.1	842.1	842.1	839.5	839.5
7.5°	805.8	803.2	800.6	800.6	798.0	795.4	795.4	792.8
10°	761.6	756.4	751.2	753.8	748.6	748.6	746.0	746.0
12.5°	712.2	707.0	707.0	701.8	696.6	696.6	691.4	691.4
15°	662.8	657.6	652.4	649.8	644.6	644.6	642.0	639.4
17.5°	608.2	603.0	597.8	595.2	592.6	590.0	587.4	584.8
20°	556.2	548.4	545.8	543.2	538.0	535.4	532.8	535.4
22.5°	506.8	496.5	493.9	491.3	488.7	483.5	480.9	478.3
25°	454.9	447.1	441.9	441.9	436.7	434.1	428.9	431.5
27.5°	405.5	400.3	395.1	392.5	387.3	384.7	382.1	382.1
30°	361.3	353.5	350.9	345.7	343.1	337.9	335.3	335.3
32.5°	317.1	309.3	306.7	304.1	298.9	293.7	293.7	293.7
35°	278.1	270.3	267.7	262.5	257.3	252.1	252.1	252.1
37.5°	239.1	231.3	226.1	223.5	218.3	215.7	210.5	210.5
40°	202.7	194.9	189.7	187.1	181.9	176.7	174.1	174.1
42.5°	166.4	161.2	156.0	153.4	148.2	143.0	140.4	140.4
45°	132.6	127.4	124.8	122.2	117.0	109.2	106.6	106.6
47.5°	104.0	98.8	96.2	91.0	85.8	80.6	75.4	75.4
50°	78.0	72.8	67.6	65.0	59.8	54.6	49.4	49.4
52.5°	54.6	49.4	46.8	41.6	36.4	31.2	28.6	26.0
55°	33.8	28.6	26.0	23.4	18.2	15.6	10.4	10.4
57.5°	18.2	13.0	10.4	7.8	5.2	2.6	2.6	2.6
60°	5.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6
62.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)