

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: P242041

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242041
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-3000K
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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1120.9 lumens
Efficiency: N/A
Efficacy: 44.8 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

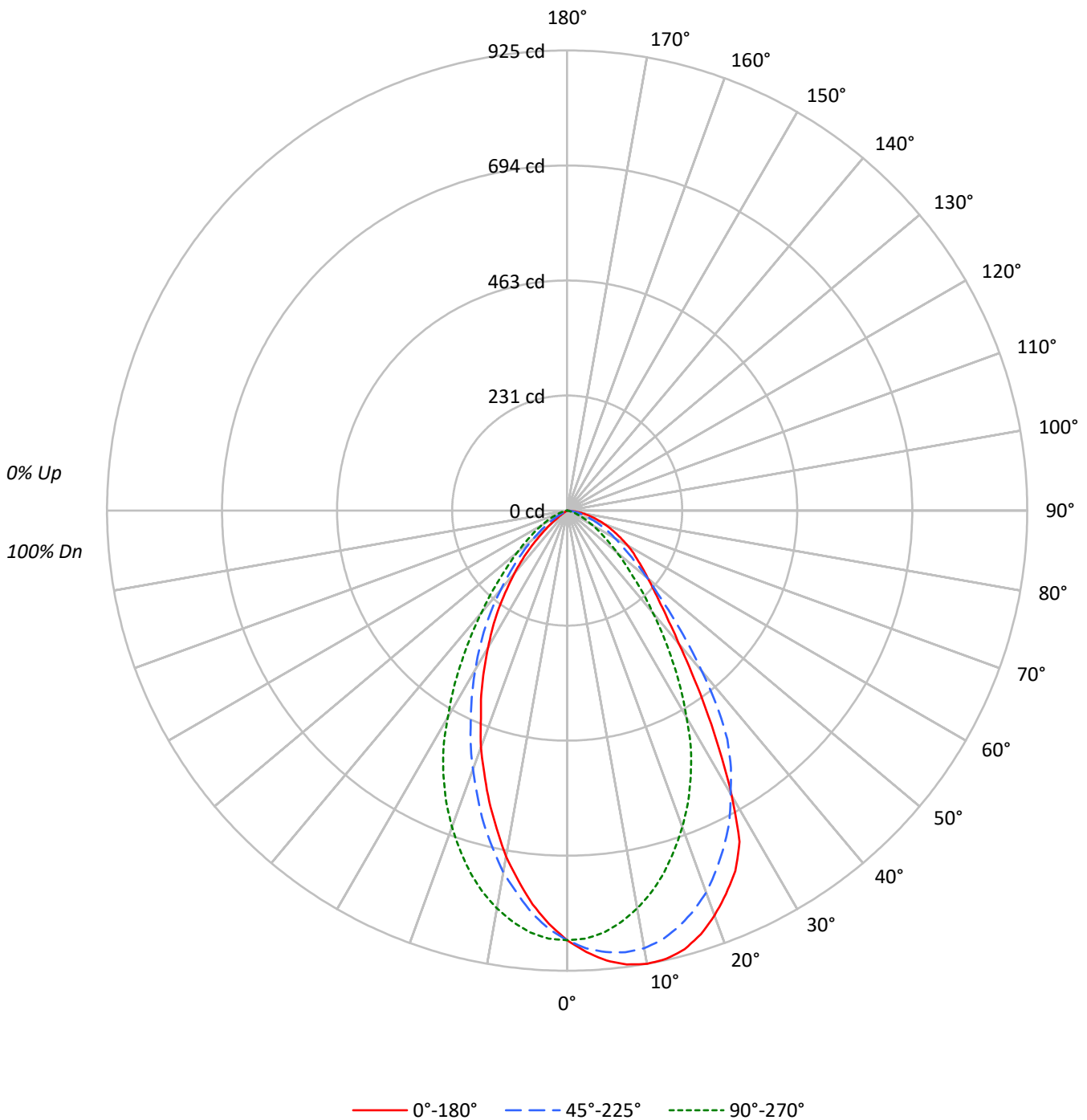
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	66111	66111	66111
5°	69767	65418	61069
10°	71910	63112	54889
15°	72341	59670	47966
20°	70557	55121	41290
25°	67540	49669	34500
30°	58502	42407	28053
35°	45301	34490	22305
40°	34912	26799	16477
45°	28773	20243	10922
50°	25197	15528	5573
55°	22980	11824	1308
60°	21478	9047	383
65°	19615	6683	0
70°	18172	4409	0
75°	16000	2898	0
80°	14105	1102	0
85°	8607	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.1	7.1
10°-20°	211.8	18.9
20°-30°	273.7	24.4
30°-40°	243.1	21.7
40°-50°	158.1	14.1
50°-60°	87.8	7.8
60°-70°	44.4	4.0
70°-80°	18.7	1.7
80°-90°	3.3	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°	565.6	50.5
0°-40°	808.7	72.1
0°-60°	1054.6	94.1
0°-90°	1120.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1120.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	864	864	864	864	864	
5°	908	891	851	812	795	87
15°	913	866	753	650	605	256
25°	800	746	588	458	408	362
35°	485	561	369	288	239	306
45°	266	295	187	143	101	209
55°	172	150	89	52	10	156
65°	108	79	37	2	0	108
75°	54	34	10	0	0	58
85°	10	5	0	0	0	12
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°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	888.3	885.9	888.3	885.9	885.9	885.9	885.9	883.4	883.4	880.9	880.9
5°	908.0	908.0	905.5	905.5	903.1	903.1	903.1	900.6	898.2	895.7	890.8
7.5°	920.3	920.3	917.8	917.8	915.4	912.9	912.9	908.0	905.5	900.6	895.7
10°	925.2	925.2	922.8	920.3	917.8	915.4	915.4	910.5	905.5	898.2	893.2
12.5°	922.8	922.8	920.3	917.8	915.4	912.9	910.5	905.5	898.2	890.8	883.4
15°	912.9	912.9	910.5	908.0	903.1	900.6	898.2	893.2	885.9	876.0	866.2
17.5°	893.2	893.2	890.8	888.3	885.9	883.4	878.5	873.6	863.7	853.9	844.0
20°	866.2	866.2	866.2	863.7	858.8	856.3	853.9	846.5	839.1	829.3	817.0
22.5°	834.2	834.2	831.7	829.3	824.3	824.3	819.4	812.0	804.7	794.8	782.5
25°	799.7	797.3	794.8	794.8	787.4	785.0	782.5	775.1	767.7	757.9	745.6
27.5°	750.5	748.1	750.5	750.5	748.1	745.6	743.1	735.8	723.4	713.6	706.2
30°	661.9	664.4	664.4	669.3	679.2	686.5	691.5	691.5	681.6	671.8	657.0
32.5°	568.4	573.3	575.8	585.6	595.5	602.9	607.8	617.6	629.9	627.5	612.7
35°	484.8	489.7	492.1	499.5	511.8	516.7	524.1	538.9	553.7	566.0	561.0
37.5°	410.9	410.9	418.3	425.7	435.5	442.9	450.3	462.6	482.3	492.1	494.6
40°	349.4	351.9	354.3	364.2	371.6	378.9	383.9	396.2	413.4	420.8	420.8
42.5°	302.7	302.7	305.1	310.0	319.9	322.4	327.3	337.1	347.0	351.9	354.3
45°	265.8	265.8	265.8	270.7	275.6	278.1	283.0	290.4	292.8	295.3	295.3
47.5°	236.2	236.2	236.2	238.7	241.1	243.6	246.1	248.5	251.0	251.0	246.1
50°	211.6	211.6	214.1	214.1	214.1	216.5	216.5	216.5	214.1	211.6	209.2
52.5°	191.9	191.9	191.9	191.9	191.9	191.9	191.9	189.5	184.6	182.1	177.2
55°	172.2	174.7	174.7	174.7	172.2	172.2	169.8	167.3	159.9	155.0	150.1
57.5°	157.5	157.5	157.5	155.0	155.0	152.6	150.1	145.2	140.3	135.3	128.0
60°	140.3	140.3	140.3	137.8	137.8	135.3	132.9	128.0	123.0	115.7	110.7
62.5°	123.0	123.0	123.0	123.0	120.6	118.1	115.7	110.7	105.8	100.9	96.0
65°	108.3	108.3	108.3	108.3	103.3	100.9	98.4	93.5	88.6	83.7	78.7
67.5°	93.5	93.5	93.5	91.0	88.6	86.1	83.7	81.2	76.3	71.4	66.4
70°	81.2	81.2	78.7	76.3	73.8	73.8	71.4	66.4	64.0	59.1	54.1
72.5°	66.4	66.4	66.4	64.0	61.5	59.1	56.6	54.1	51.7	46.8	44.3
75°	54.1	54.1	54.1	51.7	49.2	46.8	46.8	41.8	39.4	36.9	34.4
77.5°	41.8	41.8	41.8	39.4	36.9	36.9	34.4	32.0	29.5	27.1	24.6
80°	32.0	32.0	29.5	29.5	27.1	27.1	24.6	24.6	22.1	19.7	17.2
82.5°	19.7	19.7	19.7	19.7	17.2	17.2	17.2	14.8	14.8	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	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	878.5	876.0	873.6	871.1	871.1	868.6	868.6	866.2	863.7	861.2	858.8
5°	888.3	883.4	878.5	876.0	873.6	871.1	866.2	861.2	856.3	851.4	846.5
7.5°	888.3	883.4	876.0	871.1	866.2	863.7	856.3	848.9	841.6	834.2	826.8
10°	885.9	876.0	868.6	861.2	853.9	848.9	841.6	831.7	821.9	812.0	802.2
12.5°	873.6	863.7	853.9	844.0	836.6	831.7	819.4	807.1	797.3	785.0	772.7
15°	856.3	846.5	834.2	819.4	814.5	807.1	794.8	780.0	767.7	753.0	740.7
17.5°	834.2	819.4	807.1	792.3	785.0	777.6	762.8	745.6	733.3	716.1	701.3
20°	804.7	792.3	772.7	760.4	750.5	743.1	725.9	708.7	691.5	676.7	657.0
22.5°	770.2	755.4	738.2	721.0	713.6	703.8	686.5	666.9	652.1	634.9	615.2
25°	733.3	716.1	698.8	679.2	671.8	664.4	644.7	627.5	607.8	588.1	573.3
27.5°	689.0	674.2	657.0	637.3	629.9	620.1	598.0	578.3	558.6	538.9	521.7
30°	644.7	632.4	610.3	588.1	575.8	563.5	541.4	519.2	497.1	479.8	465.1
32.5°	600.4	575.8	551.2	526.6	511.8	499.5	479.8	460.2	440.5	425.7	408.5
35°	541.4	516.7	489.7	465.1	452.8	442.9	420.8	401.1	383.9	369.1	354.3
37.5°	479.8	455.2	430.6	406.0	396.2	386.3	364.2	347.0	329.7	317.4	302.7
40°	413.4	401.1	374.0	351.9	342.0	332.2	315.0	295.3	283.0	268.2	255.9
42.5°	351.9	339.6	319.9	300.2	290.4	283.0	265.8	251.0	238.7	226.4	216.5
45°	295.3	285.4	270.7	255.9	246.1	238.7	221.5	209.2	199.3	187.0	179.6
47.5°	246.1	238.7	228.8	214.1	206.7	199.3	184.6	174.7	164.9	157.5	150.1
50°	204.2	199.3	189.5	179.6	172.2	167.3	155.0	145.2	137.8	130.4	125.5
52.5°	172.2	164.9	157.5	147.6	142.7	137.8	130.4	120.6	115.7	108.3	103.3
55°	145.2	140.3	132.9	123.0	118.1	115.7	108.3	100.9	93.5	88.6	83.7
57.5°	123.0	118.1	110.7	103.3	100.9	96.0	88.6	81.2	76.3	73.8	68.9
60°	105.8	98.4	93.5	86.1	81.2	78.7	71.4	66.4	61.5	59.1	54.1
62.5°	88.6	83.7	76.3	68.9	66.4	64.0	59.1	54.1	49.2	46.8	41.8
65°	73.8	68.9	64.0	56.6	54.1	51.7	46.8	41.8	39.4	36.9	34.4
67.5°	61.5	56.6	51.7	46.8	44.3	39.4	36.9	34.4	29.5	27.1	24.6
70°	49.2	44.3	39.4	34.4	34.4	32.0	27.1	24.6	22.1	19.7	17.2
72.5°	39.4	34.4	32.0	27.1	24.6	24.6	22.1	19.7	17.2	14.8	12.3
75°	29.5	27.1	22.1	19.7	17.2	17.2	14.8	12.3	12.3	9.8	7.4
77.5°	22.1	19.7	17.2	14.8	12.3	12.3	9.8	7.4	7.4	4.9	4.9
80°	14.8	12.3	9.8	7.4	7.4	7.4	4.9	4.9	4.9	2.5	2.5
82.5°	7.4	7.4	4.9	4.9	4.9	4.9	2.5	2.5	2.5	2.5	0.0
85°	2.5	2.5	2.5	2.5	2.5	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°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	856.3	853.9	851.4	851.4	848.9	846.5	844.0	844.0	841.6	839.1	839.1
5°	841.6	836.6	831.7	829.3	826.8	821.9	819.4	814.5	812.0	807.1	804.7
7.5°	819.4	812.0	804.7	802.2	799.7	794.8	787.4	780.0	775.1	772.7	767.7
10°	794.8	785.0	775.1	770.2	767.7	757.9	750.5	743.1	738.2	730.8	723.4
12.5°	760.4	750.5	740.7	735.8	730.8	721.0	713.6	703.8	693.9	686.5	679.2
15°	725.9	713.6	701.3	696.4	689.0	679.2	669.3	659.5	649.6	639.8	632.4
17.5°	686.5	674.2	659.5	652.1	647.2	634.9	620.1	612.7	600.4	593.0	583.2
20°	644.7	629.9	615.2	610.3	602.9	588.1	575.8	563.5	553.7	543.8	534.0
22.5°	600.4	583.2	568.4	563.5	556.1	541.4	529.1	519.2	506.9	494.6	484.8
25°	556.1	538.9	524.1	514.3	506.9	494.6	479.8	470.0	457.7	447.8	440.5
27.5°	506.9	489.7	474.9	467.5	462.6	450.3	438.0	425.7	413.4	403.6	393.7
30°	450.3	438.0	425.7	420.8	413.4	403.6	391.3	381.4	369.1	359.3	349.4
32.5°	396.2	383.9	371.6	369.1	364.2	354.3	347.0	337.1	327.3	317.4	310.0
35°	344.5	332.2	324.8	319.9	315.0	307.6	300.2	295.3	287.9	278.1	270.7
37.5°	292.8	287.9	275.6	273.1	270.7	263.3	258.4	253.5	246.1	241.1	233.8
40°	248.5	241.1	233.8	231.3	226.4	221.5	216.5	211.6	206.7	204.2	196.9
42.5°	206.7	201.8	194.4	194.4	189.5	184.6	179.6	177.2	172.2	167.3	164.9
45°	174.7	167.3	164.9	159.9	159.9	155.0	150.1	147.6	142.7	137.8	132.9
47.5°	145.2	140.3	135.3	132.9	132.9	128.0	123.0	118.1	115.7	108.3	103.3
50°	120.6	115.7	113.2	110.7	108.3	105.8	100.9	96.0	91.0	86.1	78.7
52.5°	98.4	96.0	91.0	91.0	88.6	83.7	78.7	73.8	68.9	64.0	56.6
55°	81.2	76.3	73.8	71.4	68.9	66.4	61.5	56.6	51.7	44.3	39.4
57.5°	64.0	61.5	56.6	56.6	54.1	49.2	44.3	39.4	34.4	27.1	22.1
60°	51.7	46.8	44.3	41.8	39.4	36.9	29.5	24.6	19.7	14.8	7.4
62.5°	39.4	36.9	32.0	32.0	29.5	24.6	19.7	14.8	7.4	2.5	0.0
65°	29.5	27.1	24.6	22.1	19.7	14.8	9.8	4.9	2.5	0.0	0.0
67.5°	22.1	19.7	14.8	14.8	12.3	7.4	2.5	0.0	0.0	0.0	0.0
70°	14.8	12.3	9.8	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	2.5	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.4	4.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.5	2.5	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: P242041

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	863.7	863.7	863.7	863.7	863.7	863.7	863.7	863.7
2.5°	836.6	834.2	836.6	834.2	834.2	831.7	834.2	831.7
5°	802.2	799.7	799.7	797.3	797.3	797.3	794.8	794.8
7.5°	762.8	760.4	757.9	757.9	755.4	753.0	753.0	750.5
10°	721.0	716.1	711.1	713.6	708.7	708.7	706.2	706.2
12.5°	674.2	669.3	669.3	664.4	659.5	659.5	654.5	654.5
15°	627.5	622.6	617.6	615.2	610.3	610.3	607.8	605.3
17.5°	575.8	570.9	566.0	563.5	561.0	558.6	556.1	553.7
20°	526.6	519.2	516.7	514.3	509.4	506.9	504.4	506.9
22.5°	479.8	470.0	467.5	465.1	462.6	457.7	455.2	452.8
25°	430.6	423.2	418.3	418.3	413.4	410.9	406.0	408.5
27.5°	383.9	378.9	374.0	371.6	366.6	364.2	361.7	361.7
30°	342.0	334.7	332.2	327.3	324.8	319.9	317.4	317.4
32.5°	300.2	292.8	290.4	287.9	283.0	278.1	278.1	278.1
35°	263.3	255.9	253.5	248.5	243.6	238.7	238.7	238.7
37.5°	226.4	219.0	214.1	211.6	206.7	204.2	199.3	199.3
40°	191.9	184.6	179.6	177.2	172.2	167.3	164.9	164.9
42.5°	157.5	152.6	147.6	145.2	140.3	135.3	132.9	132.9
45°	125.5	120.6	118.1	115.7	110.7	103.3	100.9	100.9
47.5°	98.4	93.5	91.0	86.1	81.2	76.3	71.4	71.4
50°	73.8	68.9	64.0	61.5	56.6	51.7	46.8	46.8
52.5°	51.7	46.8	44.3	39.4	34.4	29.5	27.1	24.6
55°	32.0	27.1	24.6	22.1	17.2	14.8	9.8	9.8
57.5°	17.2	12.3	9.8	7.4	4.9	2.5	2.5	2.5
60°	4.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5
62.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)