

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: P242031

Luminaire Tested: **PRS430D010-S4M24-41SWWMW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-63)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS430D010-S4M24-41SWWMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM MATTE WHITE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1621.7 lumens
Efficiency: N/A
Efficacy: 64.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.97 / 1.07
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

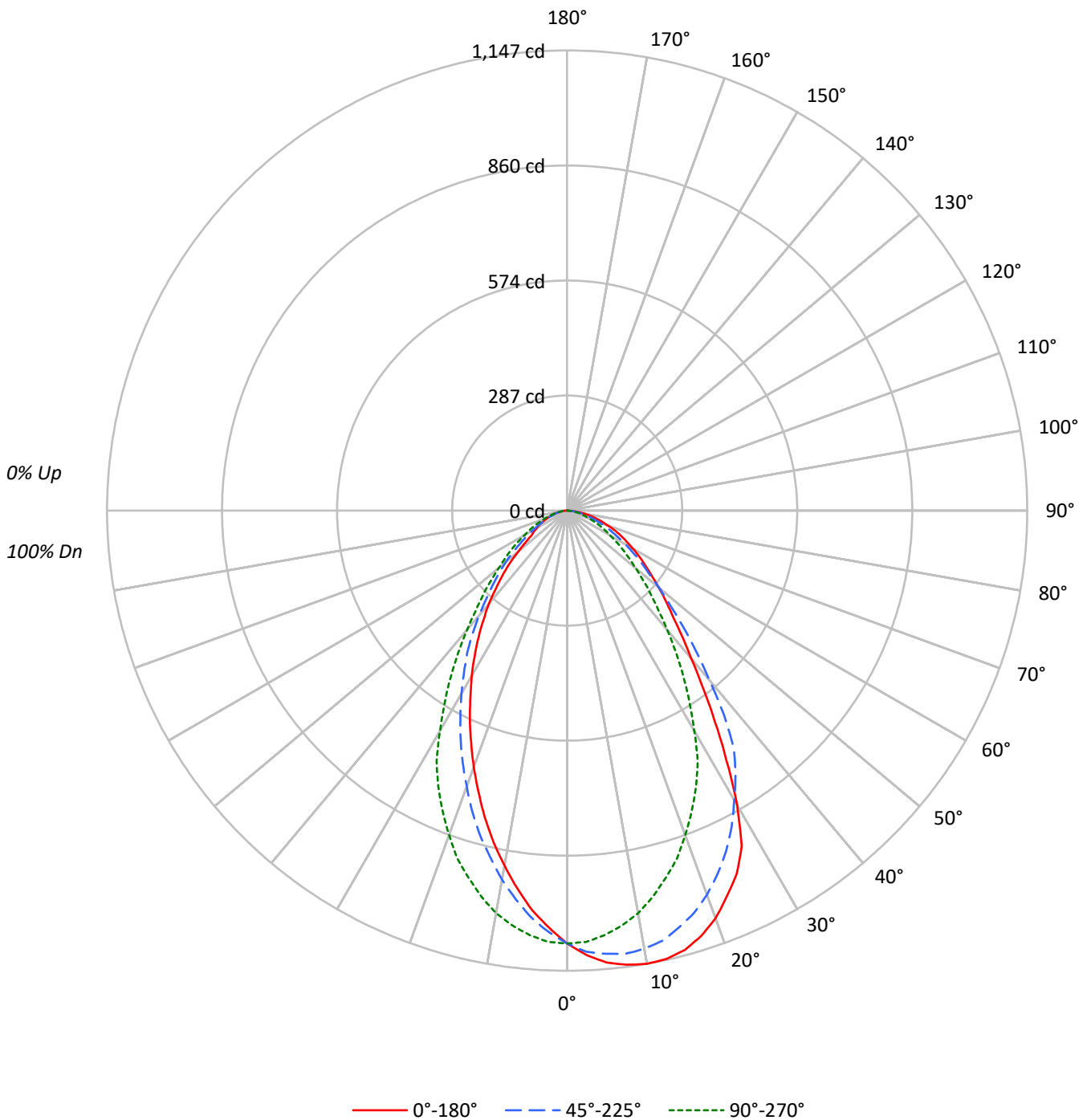
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89					89			
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78					78			
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55					55			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45					45			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	44	53	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	49	42	37	48	41	37	47	41	37	46	41	37	35					35			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	82583	82583	82583
5°	86886	81638	76813
10°	89165	79185	69843
15°	89823	75107	62769
20°	88103	70085	55398
25°	84431	64128	48444
30°	74835	56009	42009
35°	59981	47216	35985
40°	48032	38749	30296
45°	40214	31933	24540
50°	35450	26341	18862
55°	31708	22593	14586
60°	28857	18814	13380
65°	26715	16319	12370
70°	23834	13450	11011
75°	21796	11297	9700
80°	19263	9653	8419
85°	12032	7202	7202



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	6.2
10°-20°	267.9	16.5
20°-30°	355.7	21.9
30°-40°	335.2	20.7
40°-50°	245.3	15.1
50°-60°	161.1	9.9
60°-70°	97.1	6.0
70°-80°	47.8	2.9
80°-90°	11.4	0.7
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°	723.8	44.6
0°-40°	1059.0	65.3
0°-60°	1465.4	90.4
0°-90°	1621.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1621.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1079	1079	1079	1079	1079	
5°	1131	1109	1062	1019	1000	108
15°	1134	1076	948	838	792	318
25°	1000	937	759	628	574	454
35°	642	724	505	434	385	404
45°	372	407	295	262	227	292
55°	238	224	169	142	109	214
65°	148	120	90	66	68	146
75°	74	55	38	33	33	78
85°	14	11	8	8	8	19
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°	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9
2.5°	1108.9	1108.9	1108.9	1108.9	1106.2	1106.2	1106.2	1103.5	1103.5	1100.7	1100.7
5°	1130.8	1130.8	1128.0	1128.0	1125.3	1125.3	1122.6	1119.8	1117.1	1114.4	1108.9
7.5°	1141.7	1141.7	1139.0	1139.0	1136.2	1136.2	1133.5	1130.8	1125.3	1119.8	1114.4
10°	1147.2	1144.4	1144.4	1141.7	1139.0	1136.2	1133.5	1130.8	1122.6	1117.1	1108.9
12.5°	1144.4	1141.7	1141.7	1136.2	1133.5	1130.8	1128.0	1122.6	1114.4	1106.2	1098.0
15°	1133.5	1130.8	1128.0	1125.3	1119.8	1117.1	1114.4	1106.2	1098.0	1087.1	1076.1
17.5°	1111.7	1108.9	1108.9	1103.5	1098.0	1095.3	1092.5	1084.3	1073.4	1062.5	1051.6
20°	1081.6	1078.9	1076.1	1073.4	1068.0	1065.2	1062.5	1054.3	1043.4	1032.4	1018.8
22.5°	1040.6	1037.9	1037.9	1035.2	1029.7	1027.0	1024.2	1016.1	1007.9	994.2	980.5
25°	999.7	996.9	994.2	991.5	986.0	980.5	977.8	969.6	961.4	953.2	936.8
27.5°	942.3	945.0	945.0	942.3	939.6	936.8	934.1	923.2	912.3	901.3	887.7
30°	846.7	841.3	846.7	854.9	863.1	865.8	874.0	874.0	863.1	849.4	833.1
32.5°	740.2	742.9	745.7	756.6	767.5	770.2	775.7	792.1	805.7	797.5	781.2
35°	641.9	644.6	650.1	658.3	666.4	680.1	685.6	699.2	712.9	729.3	723.8
37.5°	554.5	557.2	562.7	568.1	581.8	587.2	598.2	609.1	630.9	644.6	641.9
40°	480.7	483.4	486.2	491.6	508.0	510.8	516.2	532.6	546.3	557.2	551.7
42.5°	423.4	420.6	426.1	431.6	439.7	442.5	447.9	458.9	469.8	475.3	475.3
45°	371.5	374.2	376.9	382.4	385.1	390.6	393.3	401.5	404.2	407.0	407.0
47.5°	333.2	333.2	336.0	338.7	341.4	344.1	346.9	349.6	349.6	349.6	346.9
50°	297.7	297.7	300.4	303.2	303.2	305.9	305.9	305.9	303.2	300.4	297.7
52.5°	264.9	264.9	267.7	270.4	270.4	270.4	270.4	267.7	264.9	262.2	256.7
55°	237.6	237.6	240.4	240.4	240.4	240.4	240.4	234.9	229.4	226.7	224.0
57.5°	213.0	213.0	213.0	213.0	213.0	213.0	210.3	204.8	202.1	196.7	193.9
60°	188.5	188.5	188.5	188.5	188.5	185.7	183.0	180.3	174.8	169.3	166.6
62.5°	166.6	166.6	166.6	166.6	163.9	161.1	161.1	155.7	153.0	147.5	142.0
65°	147.5	147.5	144.8	144.8	142.0	139.3	139.3	133.8	131.1	125.6	120.2
67.5°	128.4	125.6	125.6	125.6	122.9	120.2	117.4	114.7	112.0	106.5	101.1
70°	106.5	106.5	109.3	106.5	103.8	101.1	101.1	95.6	92.9	90.1	84.7
72.5°	90.1	90.1	90.1	87.4	87.4	84.7	81.9	79.2	76.5	73.7	68.3
75°	73.7	73.7	73.7	71.0	68.3	68.3	68.3	62.8	62.8	57.4	54.6
77.5°	57.4	57.4	57.4	54.6	54.6	54.6	51.9	49.2	46.4	46.4	43.7
80°	43.7	43.7	41.0	41.0	38.2	38.2	38.2	35.5	35.5	32.8	30.0
82.5°	30.0	27.3	27.3	27.3	27.3	27.3	24.6	24.6	21.9	21.9	19.1
85°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	10.9	10.9	10.9
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9
2.5°	1095.3	1095.3	1092.5	1089.8	1087.1	1087.1	1084.3	1081.6	1078.9	1076.1	1070.7
5°	1106.2	1100.7	1095.3	1089.8	1089.8	1087.1	1078.9	1073.4	1068.0	1062.5	1057.0
7.5°	1106.2	1098.0	1092.5	1084.3	1081.6	1076.1	1068.0	1059.8	1051.6	1043.4	1035.2
10°	1100.7	1089.8	1081.6	1070.7	1065.2	1059.8	1048.8	1037.9	1027.0	1018.8	1005.1
12.5°	1084.3	1073.4	1062.5	1048.8	1043.4	1037.9	1024.2	1010.6	999.7	986.0	975.1
15°	1062.5	1051.6	1037.9	1024.2	1016.1	1010.6	994.2	977.8	961.4	947.8	934.1
17.5°	1037.9	1021.5	1007.9	991.5	983.3	972.4	956.0	939.6	923.2	909.5	893.1
20°	1002.4	988.7	969.6	950.5	942.3	931.4	915.0	895.9	879.5	860.4	844.0
22.5°	966.9	947.8	928.7	906.8	898.6	887.7	868.6	846.7	830.3	811.2	792.1
25°	920.5	901.3	882.2	863.1	849.4	841.3	822.1	800.3	781.2	759.3	740.2
27.5°	871.3	852.2	833.1	811.2	800.3	789.4	764.8	742.9	721.1	704.7	682.8
30°	816.7	800.3	778.4	748.4	734.7	723.8	696.5	671.9	650.1	633.7	620.0
32.5°	762.0	737.5	707.4	677.4	663.7	650.1	622.7	600.9	584.5	568.1	551.7
35°	691.0	663.7	636.4	609.1	595.4	581.8	559.9	538.1	519.0	505.3	491.6
37.5°	625.5	595.4	565.4	540.8	527.1	516.2	491.6	475.3	458.9	445.2	431.6
40°	546.3	529.9	497.1	475.3	461.6	450.7	428.8	412.4	398.8	387.8	376.9
42.5°	469.8	461.6	434.3	412.4	401.5	393.3	374.2	360.5	346.9	336.0	330.5
45°	401.5	390.6	379.7	357.8	349.6	341.4	325.0	311.4	300.4	295.0	286.8
47.5°	344.1	336.0	325.0	308.6	300.4	295.0	281.3	270.4	262.2	256.7	251.3
50°	292.3	286.8	278.6	267.7	259.5	254.0	243.1	234.9	226.7	221.2	218.5
52.5°	251.3	245.8	237.6	229.4	224.0	218.5	210.3	202.1	199.4	193.9	188.5
55°	215.8	210.3	204.8	196.7	193.9	191.2	183.0	177.5	172.1	169.3	166.6
57.5°	188.5	183.0	174.8	169.3	166.6	163.9	158.4	153.0	147.5	144.8	142.0
60°	161.1	155.7	150.2	144.8	142.0	139.3	136.6	131.1	125.6	122.9	122.9
62.5°	139.3	133.8	128.4	122.9	122.9	120.2	114.7	112.0	109.3	106.5	103.8
65°	117.4	112.0	109.3	103.8	101.1	101.1	98.3	92.9	90.1	90.1	87.4
67.5°	98.3	95.6	90.1	87.4	84.7	84.7	79.2	79.2	76.5	73.7	71.0
70°	81.9	76.5	73.7	71.0	71.0	68.3	65.6	65.6	62.8	60.1	57.4
72.5°	65.6	62.8	60.1	57.4	57.4	54.6	54.6	51.9	49.2	49.2	46.4
75°	51.9	49.2	49.2	43.7	43.7	43.7	41.0	41.0	38.2	38.2	35.5
77.5°	41.0	38.2	35.5	35.5	32.8	32.8	32.8	30.0	30.0	30.0	27.3
80°	27.3	27.3	24.6	24.6	24.6	24.6	21.9	21.9	21.9	21.9	19.1
82.5°	19.1	16.4	16.4	16.4	16.4	16.4	13.7	13.7	13.7	13.7	13.7
85°	10.9	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9
2.5°	1068.0	1065.2	1062.5	1062.5	1059.8	1057.0	1057.0	1054.3	1051.6	1048.8	1046.1
5°	1051.6	1046.1	1040.6	1037.9	1035.2	1032.4	1027.0	1021.5	1018.8	1013.3	1010.6
7.5°	1027.0	1018.8	1013.3	1007.9	1005.1	996.9	991.5	986.0	977.8	975.1	969.6
10°	996.9	986.0	975.1	972.4	966.9	958.7	950.5	939.6	934.1	928.7	923.2
12.5°	961.4	950.5	936.8	931.4	925.9	915.0	904.1	895.9	885.0	879.5	871.3
15°	920.5	906.8	893.1	887.7	882.2	868.6	857.6	846.7	838.5	827.6	819.4
17.5°	876.8	860.4	844.0	838.5	833.1	819.4	808.5	794.8	786.6	775.7	767.5
20°	827.6	811.2	794.8	792.1	781.2	767.5	753.8	742.9	732.0	723.8	712.9
22.5°	775.7	759.3	745.7	737.5	729.3	715.6	702.0	691.0	680.1	666.4	658.3
25°	726.5	707.4	691.0	688.3	677.4	666.4	652.8	639.1	628.2	617.3	609.1
27.5°	669.2	655.5	639.1	630.9	625.5	611.8	600.9	587.2	576.3	565.4	557.2
30°	603.6	590.0	579.0	573.6	568.1	559.9	546.3	538.1	527.1	516.2	508.0
32.5°	540.8	532.6	521.7	516.2	513.5	502.6	497.1	488.9	478.0	469.8	461.6
35°	478.0	472.5	461.6	461.6	456.1	450.7	445.2	439.7	434.3	426.1	417.9
37.5°	423.4	417.9	409.7	404.2	404.2	398.8	396.0	390.6	387.8	382.4	376.9
40°	371.5	363.3	357.8	355.1	352.3	349.6	344.1	341.4	341.4	338.7	333.2
42.5°	319.6	316.8	311.4	308.6	311.4	305.9	305.9	303.2	297.7	295.0	292.3
45°	281.3	275.9	275.9	273.1	273.1	270.4	267.7	264.9	262.2	256.7	256.7
47.5°	245.8	243.1	240.4	240.4	237.6	237.6	234.9	232.2	229.4	226.7	221.2
50°	215.8	213.0	210.3	210.3	207.6	207.6	204.8	202.1	199.4	193.9	188.5
52.5°	188.5	185.7	183.0	183.0	180.3	180.3	177.5	172.1	169.3	166.6	161.1
55°	163.9	161.1	158.4	158.4	155.7	155.7	153.0	147.5	142.0	139.3	133.8
57.5°	139.3	139.3	136.6	136.6	133.8	131.1	128.4	122.9	120.2	117.4	112.0
60°	120.2	117.4	117.4	114.7	114.7	112.0	106.5	103.8	98.3	95.6	90.1
62.5°	101.1	101.1	98.3	95.6	95.6	90.1	87.4	84.7	81.9	76.5	79.2
65°	84.7	81.9	81.9	79.2	79.2	73.7	71.0	68.3	65.6	65.6	68.3
67.5°	71.0	68.3	65.6	65.6	62.8	60.1	57.4	57.4	57.4	57.4	57.4
70°	57.4	54.6	51.9	51.9	51.9	49.2	46.4	46.4	46.4	49.2	49.2
72.5°	46.4	43.7	41.0	41.0	38.2	38.2	38.2	38.2	38.2	41.0	41.0
75°	35.5	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8
77.5°	27.3	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
80°	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
82.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
85°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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: P242031

CATALOG NUMBER: PRS430D010-S4M24-41SWWMW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9	1078.9
2.5°	1046.1	1046.1	1046.1	1043.4	1043.4	1043.4	1043.4	1040.6
5°	1007.9	1007.9	1005.1	1005.1	1002.4	1002.4	1002.4	999.7
7.5°	964.2	961.4	961.4	958.7	956.0	953.2	953.2	950.5
10°	917.7	912.3	906.8	909.5	904.1	904.1	898.6	898.6
12.5°	865.8	860.4	860.4	854.9	849.4	849.4	846.7	846.7
15°	811.2	805.7	803.0	800.3	797.5	794.8	794.8	792.1
17.5°	756.6	753.8	751.1	748.4	742.9	740.2	737.5	734.7
20°	704.7	696.5	693.8	693.8	685.6	685.6	680.1	680.1
22.5°	650.1	641.9	641.9	639.1	633.7	628.2	628.2	625.5
25°	598.2	592.7	587.2	584.5	581.8	576.3	576.3	573.6
27.5°	546.3	540.8	538.1	535.3	529.9	527.1	524.4	521.7
30°	499.8	491.6	488.9	486.2	480.7	478.0	475.3	475.3
32.5°	453.4	445.2	445.2	439.7	437.0	431.6	428.8	428.8
35°	409.7	404.2	398.8	396.0	390.6	390.6	385.1	385.1
37.5°	366.0	360.5	360.5	355.1	349.6	346.9	344.1	341.4
40°	327.8	319.6	319.6	314.1	308.6	305.9	303.2	303.2
42.5°	289.5	281.3	278.6	275.9	270.4	264.9	264.9	262.2
45°	251.3	245.8	243.1	240.4	234.9	229.4	229.4	226.7
47.5°	215.8	213.0	207.6	204.8	202.1	196.7	193.9	193.9
50°	185.7	183.0	177.5	174.8	169.3	163.9	161.1	158.4
52.5°	155.7	153.0	150.2	147.5	142.0	136.6	133.8	131.1
55°	131.1	128.4	122.9	122.9	117.4	114.7	112.0	109.3
57.5°	106.5	103.8	101.1	101.1	98.3	98.3	98.3	98.3
60°	87.4	90.1	90.1	90.1	90.1	90.1	90.1	87.4
62.5°	79.2	79.2	79.2	79.2	79.2	79.2	79.2	79.2
65°	68.3	68.3	68.3	68.3	68.3	68.3	68.3	68.3
67.5°	57.4	57.4	60.1	57.4	57.4	57.4	57.4	57.4
70°	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2
72.5°	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
75°	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8
77.5°	27.3	27.3	24.6	24.6	27.3	27.3	24.6	27.3
80°	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
82.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
85°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)