

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: P242021

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242021
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-62)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS430D010-S4M24-41SWWH-4000K
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM HAZE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1493.0 lumens
Efficiency: N/A
Efficacy: 59.7 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.96 / 1.05
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

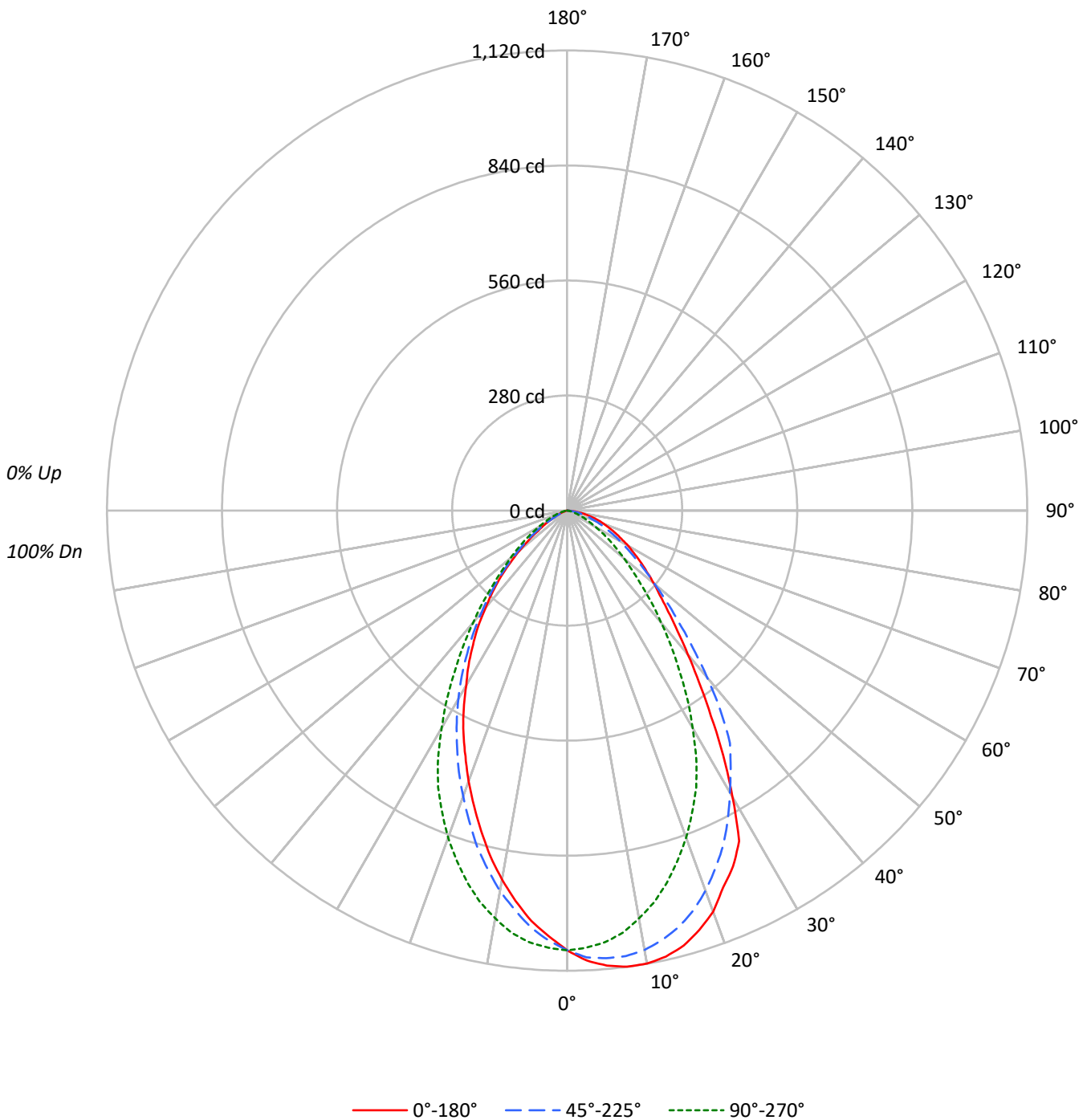
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	73	68	78	72	68	76	71	67	74	69	66	64					64			
5	85	74	67	62	83	73	67	61	71	65	61	70	64	60	68	63	60	58					58			
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53					53			
7	75	63	56	51	73	62	56	51	61	55	50	60	54	50	59	53	50	48					48			
8	70	59	51	46	69	58	51	46	57	51	46	56	50	46	55	49	46	44					44			
9	66	55	48	43	65	54	47	43	53	47	42	52	46	42	51	46	42	41					41			
10	62	51	44	40	61	51	44	39	50	44	39	49	43	39	48	43	39	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	81917	81917	81917
5°	85426	81031	77043
10°	87020	78338	70869
15°	86867	74307	64013
20°	84633	68977	57125
25°	80732	62743	50454
30°	71176	53950	43388
35°	57037	44422	37377
40°	45684	35562	30885
45°	37681	27560	24746
50°	32783	21339	17945
55°	29119	16641	11437
60°	26239	12323	7562
65°	23527	8947	4709
70°	21507	6401	2909
75°	19194	3845	1538
80°	16045	2292	1146
85°	11417	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	6.7
10°-20°	265.0	17.7
20°-30°	348.7	23.4
30°-40°	323.7	21.7
40°-50°	226.1	15.1
50°-60°	132.8	8.9
60°-70°	65.9	4.4
70°-80°	26.6	1.8
80°-90°	4.9	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°	713.1	47.8
0°-40°	1036.8	69.4
0°-60°	1395.7	93.5
0°-90°	1493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1493.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1070	1070	1070	1070	1070	
5°	1112	1094	1055	1018	1003	106
15°	1096	1049	938	847	808	308
25°	956	899	743	634	597	434
35°	610	691	475	423	400	384
45°	348	384	255	236	229	273
55°	218	203	125	101	86	196
65°	130	104	49	21	26	129
75°	65	44	13	5	5	69
85°	13	8	0	0	0	16
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°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1096.2	1093.6	1093.6	1093.6	1093.6	1091.0	1091.0	1091.0	1088.4	1088.4	1088.4
5°	1111.8	1111.8	1109.2	1109.2	1106.6	1106.6	1106.6	1104.0	1101.4	1098.8	1093.6
7.5°	1119.6	1119.6	1117.0	1117.0	1114.4	1111.8	1111.8	1106.6	1104.0	1098.8	1093.6
10°	1119.6	1119.6	1117.0	1117.0	1111.8	1109.2	1109.2	1106.6	1098.8	1093.6	1085.8
12.5°	1111.8	1111.8	1109.2	1106.6	1104.0	1101.4	1098.8	1093.6	1085.8	1078.0	1070.2
15°	1096.2	1096.2	1093.6	1091.0	1085.8	1083.2	1080.6	1075.4	1067.6	1057.2	1049.4
17.5°	1070.2	1070.2	1067.6	1065.0	1062.4	1057.2	1054.6	1046.8	1039.0	1031.2	1020.9
20°	1039.0	1036.4	1036.4	1033.8	1028.6	1028.6	1023.4	1015.7	1007.9	994.9	984.5
22.5°	992.3	994.9	994.9	989.7	984.5	984.5	979.3	976.7	966.3	955.9	942.9
25°	955.9	953.3	953.3	948.1	940.3	940.3	937.7	929.9	919.5	909.2	898.8
27.5°	906.6	904.0	904.0	904.0	896.2	896.2	891.0	880.6	870.2	862.4	846.8
30°	805.3	813.0	813.0	820.8	828.6	833.8	839.0	833.8	820.8	807.8	792.3
32.5°	706.5	711.7	716.9	724.7	735.1	742.9	750.7	758.5	768.9	755.9	740.3
35°	610.4	615.6	618.2	628.6	641.6	644.2	654.6	672.8	683.2	693.6	691.0
37.5°	527.3	529.9	535.1	542.9	553.3	561.1	568.9	581.9	600.0	615.6	613.0
40°	457.2	454.6	462.4	465.0	475.4	483.2	493.5	503.9	522.1	529.9	529.9
42.5°	397.4	397.4	400.0	405.2	413.0	418.2	423.4	433.8	449.4	452.0	452.0
45°	348.1	348.1	350.7	355.9	361.1	361.1	368.9	379.2	381.8	384.4	384.4
47.5°	306.5	309.1	309.1	311.7	314.3	319.5	322.1	327.3	327.3	327.3	327.3
50°	275.3	275.3	275.3	277.9	280.5	283.1	283.1	283.1	283.1	280.5	277.9
52.5°	244.2	244.2	244.2	246.8	246.8	249.4	249.4	246.8	244.2	241.6	239.0
55°	218.2	215.6	218.2	218.2	220.8	220.8	218.2	215.6	213.0	207.8	202.6
57.5°	192.2	192.2	192.2	192.2	194.8	192.2	192.2	189.6	184.4	179.2	174.0
60°	171.4	168.8	168.8	168.8	171.4	168.8	168.8	163.6	161.1	153.3	148.1
62.5°	148.1	148.1	148.1	150.7	148.1	148.1	145.5	140.3	137.7	132.5	127.3
65°	129.9	129.9	129.9	129.9	127.3	124.7	124.7	119.5	116.9	111.7	103.9
67.5°	111.7	111.7	111.7	111.7	109.1	106.5	106.5	101.3	98.7	93.5	88.3
70°	96.1	93.5	96.1	93.5	90.9	88.3	88.3	85.7	80.5	75.3	70.1
72.5°	80.5	80.5	80.5	77.9	75.3	72.7	72.7	67.5	64.9	62.3	57.1
75°	64.9	64.9	64.9	62.3	59.7	59.7	57.1	54.5	52.0	49.4	44.2
77.5°	49.4	49.4	49.4	49.4	46.8	44.2	44.2	41.6	39.0	36.4	33.8
80°	36.4	36.4	36.4	33.8	33.8	33.8	31.2	31.2	28.6	26.0	23.4
82.5°	23.4	23.4	23.4	23.4	20.8	20.8	20.8	18.2	18.2	15.6	13.0
85°	13.0	13.0	13.0	13.0	10.4	10.4	10.4	10.4	10.4	7.8	7.8
87.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1085.8	1083.2	1080.6	1078.0	1078.0	1075.4	1072.8	1070.2	1067.6	1065.0	1065.0
5°	1091.0	1085.8	1083.2	1078.0	1075.4	1075.4	1070.2	1065.0	1059.8	1054.6	1049.4
7.5°	1088.4	1083.2	1075.4	1070.2	1067.6	1062.4	1057.2	1049.4	1041.6	1036.4	1028.6
10°	1078.0	1070.2	1062.4	1052.0	1049.4	1044.2	1036.4	1026.0	1018.3	1007.9	1000.1
12.5°	1062.4	1052.0	1041.6	1031.2	1026.0	1020.9	1010.5	997.5	987.1	976.7	963.7
15°	1036.4	1028.6	1013.1	1002.7	994.9	989.7	976.7	963.7	950.7	937.7	927.3
17.5°	1005.3	994.9	981.9	966.3	958.5	953.3	937.7	919.5	906.6	893.6	883.2
20°	974.1	958.5	942.9	927.3	916.9	911.8	893.6	875.4	862.4	846.8	831.2
22.5°	932.5	914.4	898.8	880.6	872.8	862.4	846.8	826.0	807.8	794.9	776.7
25°	883.2	870.2	849.4	831.2	820.8	813.0	792.3	776.7	758.5	742.9	724.7
27.5°	833.8	815.6	800.1	781.9	768.9	758.5	740.3	719.5	701.3	680.6	665.0
30°	779.3	766.3	745.5	716.9	703.9	693.6	670.2	646.8	628.6	610.4	597.4
32.5°	724.7	698.8	675.4	649.4	636.4	626.0	600.0	581.9	561.1	545.5	532.5
35°	659.8	633.8	607.8	576.7	566.3	553.3	529.9	511.7	490.9	475.4	465.0
37.5°	594.8	563.7	535.1	511.7	501.3	485.7	465.0	444.2	428.6	415.6	402.6
40°	524.7	498.7	472.8	444.2	433.8	423.4	402.6	387.0	366.3	355.9	345.5
42.5°	446.8	436.4	410.4	387.0	374.1	363.7	342.9	327.3	314.3	303.9	293.5
45°	379.2	371.5	353.3	329.9	322.1	311.7	293.5	275.3	265.0	254.6	246.8
47.5°	322.1	314.3	301.3	280.5	270.1	262.4	246.8	233.8	223.4	213.0	207.8
50°	272.7	265.0	252.0	239.0	231.2	220.8	207.8	197.4	187.0	179.2	174.0
52.5°	231.2	223.4	210.4	200.0	194.8	187.0	174.0	166.2	155.9	150.7	145.5
55°	197.4	189.6	179.2	168.8	163.6	155.9	145.5	135.1	129.9	124.7	119.5
57.5°	168.8	158.5	150.7	142.9	137.7	129.9	119.5	114.3	106.5	101.3	96.1
60°	142.9	135.1	127.3	116.9	111.7	109.1	98.7	90.9	85.7	80.5	75.3
62.5°	119.5	111.7	103.9	96.1	93.5	88.3	80.5	72.7	67.5	62.3	59.7
65°	98.7	93.5	85.7	77.9	75.3	70.1	62.3	57.1	52.0	49.4	46.8
67.5°	83.1	75.3	70.1	62.3	59.7	57.1	49.4	44.2	41.6	39.0	33.8
70°	64.9	59.7	54.5	49.4	46.8	44.2	39.0	33.8	31.2	28.6	26.0
72.5°	52.0	46.8	41.6	36.4	33.8	33.8	28.6	26.0	23.4	20.8	18.2
75°	41.6	36.4	31.2	28.6	26.0	23.4	20.8	18.2	15.6	13.0	13.0
77.5°	28.6	26.0	23.4	18.2	18.2	15.6	13.0	13.0	10.4	10.4	7.8
80°	20.8	18.2	15.6	13.0	10.4	10.4	7.8	7.8	5.2	5.2	5.2
82.5°	13.0	10.4	7.8	7.8	7.8	5.2	5.2	5.2	2.6	2.6	2.6
85°	5.2	5.2	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	0.0
87.5°	2.6	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°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1062.4	1059.8	1057.2	1054.6	1054.6	1054.6	1049.4	1049.4	1046.8	1044.2	1044.2
5°	1046.8	1041.6	1036.4	1036.4	1031.2	1028.6	1026.0	1020.9	1018.3	1015.7	1013.1
7.5°	1020.9	1015.7	1007.9	1005.3	1002.7	997.5	989.7	987.1	979.3	976.7	974.1
10°	992.3	981.9	976.7	968.9	968.9	958.5	953.3	945.5	940.3	935.1	929.9
12.5°	955.9	942.9	932.5	929.9	924.7	914.4	909.2	898.8	893.6	888.4	883.2
15°	914.4	904.0	891.0	885.8	880.6	870.2	862.4	854.6	846.8	839.0	833.8
17.5°	867.6	857.2	841.6	836.4	833.8	820.8	810.4	800.1	792.3	787.1	779.3
20°	818.2	805.3	792.3	787.1	781.9	771.5	761.1	750.7	740.3	732.5	727.3
22.5°	763.7	748.1	737.7	732.5	727.3	714.3	706.5	696.2	688.4	680.6	675.4
25°	711.7	696.2	683.2	678.0	670.2	659.8	652.0	644.2	633.8	626.0	620.8
27.5°	652.0	636.4	626.0	623.4	615.6	607.8	597.4	587.1	581.9	574.1	568.9
30°	587.1	576.7	568.9	561.1	558.5	550.7	545.5	537.7	529.9	522.1	514.3
32.5°	519.5	511.7	501.3	501.3	498.7	493.5	488.3	483.2	478.0	472.8	465.0
35°	457.2	446.8	441.6	441.6	436.4	433.8	433.8	428.6	423.4	420.8	418.2
37.5°	394.8	389.6	381.8	381.8	379.2	379.2	376.7	374.1	374.1	374.1	371.5
40°	337.7	332.5	327.3	324.7	324.7	324.7	322.1	324.7	324.7	324.7	324.7
42.5°	285.7	283.1	277.9	277.9	277.9	277.9	277.9	277.9	277.9	280.5	280.5
45°	244.2	239.0	236.4	233.8	236.4	233.8	233.8	236.4	236.4	239.0	236.4
47.5°	202.6	202.6	197.4	197.4	197.4	197.4	197.4	197.4	197.4	197.4	200.0
50°	171.4	166.2	166.2	163.6	163.6	163.6	163.6	163.6	161.1	163.6	163.6
52.5°	142.9	137.7	137.7	135.1	135.1	132.5	132.5	129.9	129.9	129.9	129.9
55°	116.9	111.7	111.7	109.1	109.1	106.5	106.5	103.9	101.3	101.3	98.7
57.5°	93.5	88.3	88.3	85.7	85.7	83.1	80.5	77.9	75.3	75.3	72.7
60°	72.7	70.1	67.5	67.5	64.9	62.3	59.7	54.5	52.0	52.0	49.4
62.5°	57.1	54.5	52.0	49.4	49.4	44.2	41.6	36.4	33.8	31.2	33.8
65°	44.2	41.6	39.0	36.4	33.8	31.2	26.0	23.4	20.8	23.4	23.4
67.5°	31.2	28.6	26.0	26.0	23.4	20.8	15.6	15.6	15.6	15.6	18.2
70°	23.4	20.8	18.2	15.6	13.0	10.4	10.4	10.4	10.4	10.4	13.0
72.5°	15.6	13.0	10.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
75°	10.4	7.8	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	7.8	5.2	2.6	2.6	2.6	2.6	2.6	5.2	5.2	2.6	5.2
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	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



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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1044.2	1041.6	1041.6	1039.0	1039.0	1041.6	1039.0	1036.4
5°	1007.9	1007.9	1007.9	1005.3	1002.7	1002.7	1002.7	1002.7
7.5°	968.9	966.3	966.3	966.3	963.7	958.5	958.5	958.5
10°	924.7	919.5	919.5	916.9	916.9	914.4	914.4	911.8
12.5°	878.0	872.8	870.2	867.6	865.0	862.4	865.0	862.4
15°	828.6	823.4	818.2	818.2	815.6	810.4	810.4	807.8
17.5°	774.1	766.3	766.3	763.7	758.5	758.5	755.9	753.3
20°	719.5	714.3	711.7	709.1	706.5	701.3	701.3	701.3
22.5°	665.0	659.8	657.2	657.2	654.6	649.4	649.4	646.8
25°	613.0	607.8	605.2	602.6	600.0	600.0	597.4	597.4
27.5°	563.7	555.9	555.9	550.7	548.1	545.5	545.5	545.5
30°	509.1	506.5	501.3	503.9	496.1	496.1	496.1	490.9
32.5°	459.8	457.2	454.6	454.6	449.4	446.8	449.4	446.8
35°	413.0	410.4	407.8	405.2	402.6	402.6	400.0	400.0
37.5°	368.9	363.7	361.1	361.1	358.5	358.5	355.9	355.9
40°	322.1	322.1	319.5	316.9	314.3	311.7	309.1	309.1
42.5°	280.5	277.9	275.3	275.3	272.7	267.6	267.6	267.6
45°	239.0	236.4	233.8	233.8	231.2	228.6	226.0	228.6
47.5°	197.4	197.4	197.4	194.8	192.2	189.6	187.0	187.0
50°	163.6	161.1	161.1	161.1	155.9	153.3	150.7	150.7
52.5°	129.9	127.3	127.3	127.3	124.7	119.5	116.9	116.9
55°	98.7	98.7	98.7	96.1	93.5	90.9	88.3	85.7
57.5°	70.1	70.1	70.1	70.1	70.1	70.1	67.5	67.5
60°	49.4	52.0	52.0	54.5	54.5	52.0	49.4	49.4
62.5°	36.4	39.0	39.0	39.0	39.0	36.4	36.4	36.4
65°	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
67.5°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
70°	13.0	13.0	13.0	13.0	13.0	13.0	10.4	13.0
72.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	2.6	5.2	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6
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)