

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: P242036

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242036
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-4000K
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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1542.4 lumens
Efficiency: N/A
Efficacy: 61.7 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

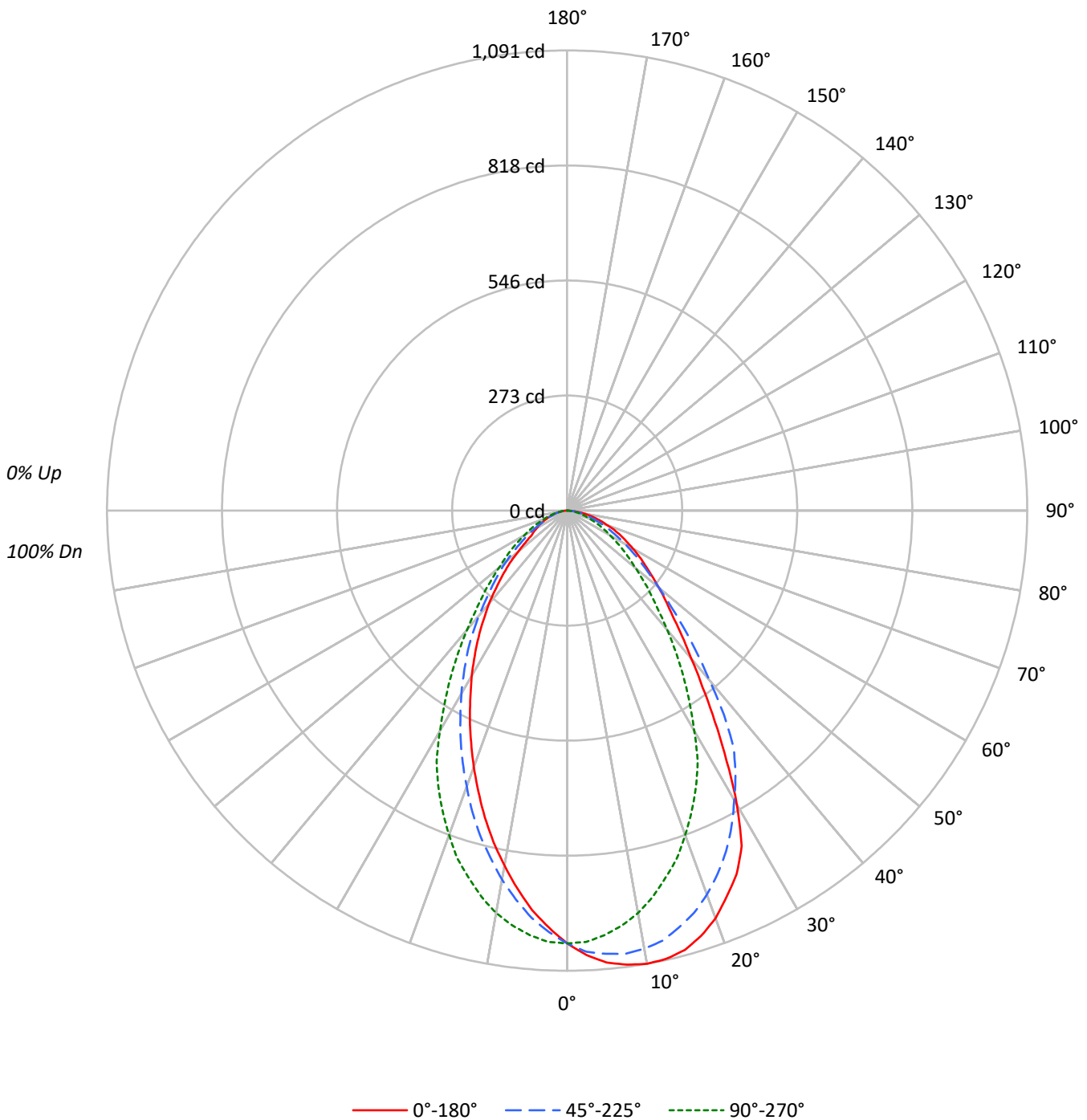
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	78541	78541	78541
5°	82637	77643	73055
10°	84797	75307	66423
15°	85432	71430	59694
20°	83794	66655	52686
25°	80301	60994	46071
30°	71176	53269	39950
35°	57046	44908	34228
40°	45684	36861	28807
45°	38244	30375	23338
50°	33724	25055	17945
55°	30160	21499	13865
60°	27433	17896	12722
65°	25411	15522	11755
70°	22671	12779	10474
75°	20731	10765	9227
80°	18337	9169	8022
85°	11417	6850	6850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	6.2
10°-20°	254.8	16.5
20°-30°	338.3	21.9
30°-40°	318.8	20.7
40°-50°	233.3	15.1
50°-60°	153.2	9.9
60°-70°	92.3	6.0
70°-80°	45.5	2.9
80°-90°	10.9	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°	688.4	44.6
0°-40°	1007.2	65.3
0°-60°	1393.7	90.4
0°-90°	1542.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1542.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1026	1026	1026	1026	1026	
5°	1076	1055	1010	969	951	103
15°	1078	1024	901	798	753	303
25°	951	891	722	598	546	432
35°	610	688	481	413	366	384
45°	353	387	281	249	216	278
55°	226	213	161	135	104	204
65°	140	114	86	62	65	139
75°	70	52	36	31	31	74
85°	13	10	8	8	8	18
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°	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1
2.5°	1054.7	1054.7	1054.7	1054.7	1052.1	1052.1	1052.1	1049.5	1049.5	1046.9	1046.9
5°	1075.5	1075.5	1072.9	1072.9	1070.3	1070.3	1067.7	1065.1	1062.5	1059.9	1054.7
7.5°	1085.8	1085.8	1083.2	1083.2	1080.6	1080.6	1078.1	1075.5	1070.3	1065.1	1059.9
10°	1091.0	1088.4	1088.4	1085.8	1083.2	1080.6	1078.1	1075.5	1067.7	1062.5	1054.7
12.5°	1088.4	1085.8	1085.8	1080.6	1078.1	1075.5	1072.9	1067.7	1059.9	1052.1	1044.3
15°	1078.1	1075.5	1072.9	1070.3	1065.1	1062.5	1059.9	1052.1	1044.3	1033.9	1023.5
17.5°	1057.3	1054.7	1054.7	1049.5	1044.3	1041.7	1039.1	1031.3	1020.9	1010.5	1000.1
20°	1028.7	1026.1	1023.5	1020.9	1015.7	1013.1	1010.5	1002.7	992.3	981.9	968.9
22.5°	989.7	987.1	987.1	984.5	979.3	976.7	974.1	966.3	958.6	945.6	932.6
25°	950.8	948.2	945.6	943.0	937.8	932.6	930.0	922.2	914.4	906.6	891.0
27.5°	896.2	898.8	898.8	896.2	893.6	891.0	888.4	878.0	867.6	857.2	844.3
30°	805.3	800.1	805.3	813.1	820.9	823.5	831.3	831.3	820.9	807.9	792.3
32.5°	704.0	706.6	709.2	719.6	730.0	732.6	737.8	753.3	766.3	758.5	742.9
35°	610.5	613.1	618.3	626.0	633.8	646.8	652.0	665.0	678.0	693.6	688.4
37.5°	527.3	529.9	535.1	540.3	553.3	558.5	568.9	579.3	600.1	613.1	610.5
40°	457.2	459.8	462.4	467.6	483.2	485.8	491.0	506.6	519.5	529.9	524.7
42.5°	402.6	400.0	405.2	410.4	418.2	420.8	426.0	436.4	446.8	452.0	452.0
45°	353.3	355.9	358.5	363.7	366.3	371.5	374.1	381.9	384.5	387.1	387.1
47.5°	316.9	316.9	319.5	322.1	324.7	327.3	329.9	332.5	332.5	332.5	329.9
50°	283.2	283.2	285.7	288.3	288.3	290.9	290.9	290.9	288.3	285.7	283.2
52.5°	252.0	252.0	254.6	257.2	257.2	257.2	257.2	254.6	252.0	249.4	244.2
55°	226.0	226.0	228.6	228.6	228.6	228.6	228.6	223.4	218.2	215.6	213.0
57.5°	202.6	202.6	202.6	202.6	202.6	202.6	200.0	194.8	192.2	187.0	184.4
60°	179.2	179.2	179.2	179.2	179.2	176.6	174.0	171.4	166.3	161.1	158.5
62.5°	158.5	158.5	158.5	158.5	155.9	153.3	153.3	148.1	145.5	140.3	135.1
65°	140.3	140.3	137.7	137.7	135.1	132.5	132.5	127.3	124.7	119.5	114.3
67.5°	122.1	119.5	119.5	119.5	116.9	114.3	111.7	109.1	106.5	101.3	96.1
70°	101.3	101.3	103.9	101.3	98.7	96.1	96.1	90.9	88.3	85.7	80.5
72.5°	85.7	85.7	85.7	83.1	83.1	80.5	77.9	75.3	72.7	70.1	64.9
75°	70.1	70.1	70.1	67.5	64.9	64.9	64.9	59.7	59.7	54.6	52.0
77.5°	54.6	54.6	54.6	52.0	52.0	52.0	49.4	46.8	44.2	44.2	41.6
80°	41.6	41.6	39.0	39.0	36.4	36.4	36.4	33.8	33.8	31.2	28.6
82.5°	28.6	26.0	26.0	26.0	26.0	26.0	23.4	23.4	20.8	20.8	18.2
85°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	10.4	10.4	10.4
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°	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1
2.5°	1041.7	1041.7	1039.1	1036.5	1033.9	1033.9	1031.3	1028.7	1026.1	1023.5	1018.3
5°	1052.1	1046.9	1041.7	1036.5	1036.5	1033.9	1026.1	1020.9	1015.7	1010.5	1005.3
7.5°	1052.1	1044.3	1039.1	1031.3	1028.7	1023.5	1015.7	1007.9	1000.1	992.3	984.5
10°	1046.9	1036.5	1028.7	1018.3	1013.1	1007.9	997.5	987.1	976.7	968.9	956.0
12.5°	1031.3	1020.9	1010.5	997.5	992.3	987.1	974.1	961.2	950.8	937.8	927.4
15°	1010.5	1000.1	987.1	974.1	966.3	961.2	945.6	930.0	914.4	901.4	888.4
17.5°	987.1	971.5	958.6	943.0	935.2	924.8	909.2	893.6	878.0	865.0	849.5
20°	953.4	940.4	922.2	904.0	896.2	885.8	870.2	852.1	836.5	818.3	802.7
22.5°	919.6	901.4	883.2	862.4	854.6	844.3	826.1	805.3	789.7	771.5	753.3
25°	875.4	857.2	839.1	820.9	807.9	800.1	781.9	761.1	742.9	722.2	704.0
27.5°	828.7	810.5	792.3	771.5	761.1	750.7	727.4	706.6	685.8	670.2	649.4
30°	776.7	761.1	740.3	711.8	698.8	688.4	662.4	639.0	618.3	602.7	589.7
32.5°	724.8	701.4	672.8	644.2	631.2	618.3	592.3	571.5	555.9	540.3	524.7
35°	657.2	631.2	605.3	579.3	566.3	553.3	532.5	511.7	493.6	480.6	467.6
37.5°	594.9	566.3	537.7	514.3	501.4	491.0	467.6	452.0	436.4	423.4	410.4
40°	519.5	504.0	472.8	452.0	439.0	428.6	407.8	392.3	379.3	368.9	358.5
42.5°	446.8	439.0	413.0	392.3	381.9	374.1	355.9	342.9	329.9	319.5	314.3
45°	381.9	371.5	361.1	340.3	332.5	324.7	309.1	296.1	285.7	280.6	272.8
47.5°	327.3	319.5	309.1	293.5	285.7	280.6	267.6	257.2	249.4	244.2	239.0
50°	278.0	272.8	265.0	254.6	246.8	241.6	231.2	223.4	215.6	210.4	207.8
52.5°	239.0	233.8	226.0	218.2	213.0	207.8	200.0	192.2	189.6	184.4	179.2
55°	205.2	200.0	194.8	187.0	184.4	181.8	174.0	168.9	163.7	161.1	158.5
57.5°	179.2	174.0	166.3	161.1	158.5	155.9	150.7	145.5	140.3	137.7	135.1
60°	153.3	148.1	142.9	137.7	135.1	132.5	129.9	124.7	119.5	116.9	116.9
62.5°	132.5	127.3	122.1	116.9	116.9	114.3	109.1	106.5	103.9	101.3	98.7
65°	111.7	106.5	103.9	98.7	96.1	96.1	93.5	88.3	85.7	85.7	83.1
67.5°	93.5	90.9	85.7	83.1	80.5	80.5	75.3	75.3	72.7	70.1	67.5
70°	77.9	72.7	70.1	67.5	67.5	64.9	62.3	62.3	59.7	57.1	54.6
72.5°	62.3	59.7	57.1	54.6	54.6	52.0	52.0	49.4	46.8	46.8	44.2
75°	49.4	46.8	46.8	41.6	41.6	41.6	39.0	39.0	36.4	36.4	33.8
77.5°	39.0	36.4	33.8	33.8	31.2	31.2	31.2	28.6	28.6	28.6	26.0
80°	26.0	26.0	23.4	23.4	23.4	23.4	20.8	20.8	20.8	20.8	18.2
82.5°	18.2	15.6	15.6	15.6	15.6	15.6	13.0	13.0	13.0	13.0	13.0
85°	10.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1
2.5°	1015.7	1013.1	1010.5	1010.5	1007.9	1005.3	1005.3	1002.7	1000.1	997.5	994.9
5°	1000.1	994.9	989.7	987.1	984.5	981.9	976.7	971.5	968.9	963.8	961.2
7.5°	976.7	968.9	963.8	958.6	956.0	948.2	943.0	937.8	930.0	927.4	922.2
10°	948.2	937.8	927.4	924.8	919.6	911.8	904.0	893.6	888.4	883.2	878.0
12.5°	914.4	904.0	891.0	885.8	880.6	870.2	859.8	852.1	841.7	836.5	828.7
15°	875.4	862.4	849.5	844.3	839.1	826.1	815.7	805.3	797.5	787.1	779.3
17.5°	833.9	818.3	802.7	797.5	792.3	779.3	768.9	755.9	748.1	737.8	730.0
20°	787.1	771.5	755.9	753.3	742.9	730.0	717.0	706.6	696.2	688.4	678.0
22.5°	737.8	722.2	709.2	701.4	693.6	680.6	667.6	657.2	646.8	633.8	626.0
25°	691.0	672.8	657.2	654.6	644.2	633.8	620.9	607.9	597.5	587.1	579.3
27.5°	636.4	623.5	607.9	600.1	594.9	581.9	571.5	558.5	548.1	537.7	529.9
30°	574.1	561.1	550.7	545.5	540.3	532.5	519.5	511.7	501.4	491.0	483.2
32.5°	514.3	506.6	496.2	491.0	488.4	478.0	472.8	465.0	454.6	446.8	439.0
35°	454.6	449.4	439.0	439.0	433.8	428.6	423.4	418.2	413.0	405.2	397.5
37.5°	402.6	397.5	389.7	384.5	384.5	379.3	376.7	371.5	368.9	363.7	358.5
40°	353.3	345.5	340.3	337.7	335.1	332.5	327.3	324.7	324.7	322.1	316.9
42.5°	303.9	301.3	296.1	293.5	296.1	290.9	290.9	288.3	283.2	280.6	278.0
45°	267.6	262.4	262.4	259.8	259.8	257.2	254.6	252.0	249.4	244.2	244.2
47.5°	233.8	231.2	228.6	228.6	226.0	226.0	223.4	220.8	218.2	215.6	210.4
50°	205.2	202.6	200.0	200.0	197.4	197.4	194.8	192.2	189.6	184.4	179.2
52.5°	179.2	176.6	174.0	174.0	171.4	171.4	168.9	163.7	161.1	158.5	153.3
55°	155.9	153.3	150.7	150.7	148.1	148.1	145.5	140.3	135.1	132.5	127.3
57.5°	132.5	132.5	129.9	129.9	127.3	124.7	122.1	116.9	114.3	111.7	106.5
60°	114.3	111.7	111.7	109.1	109.1	106.5	101.3	98.7	93.5	90.9	85.7
62.5°	96.1	96.1	93.5	90.9	90.9	85.7	83.1	80.5	77.9	72.7	75.3
65°	80.5	77.9	77.9	75.3	75.3	70.1	67.5	64.9	62.3	62.3	64.9
67.5°	67.5	64.9	62.3	62.3	59.7	57.1	54.6	54.6	54.6	54.6	54.6
70°	54.6	52.0	49.4	49.4	49.4	46.8	44.2	44.2	44.2	46.8	46.8
72.5°	44.2	41.6	39.0	39.0	36.4	36.4	36.4	36.4	36.4	39.0	39.0
75°	33.8	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
77.5°	26.0	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
80°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
82.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
85°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	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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CATALOG NUMBER: PRS430D010-S4M24-41SWWMW-4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1	1026.1
2.5°	994.9	994.9	994.9	992.3	992.3	992.3	992.3	989.7
5°	958.6	958.6	956.0	956.0	953.4	953.4	953.4	950.8
7.5°	917.0	914.4	914.4	911.8	909.2	906.6	906.6	904.0
10°	872.8	867.6	862.4	865.0	859.8	859.8	854.6	854.6
12.5°	823.5	818.3	818.3	813.1	807.9	807.9	805.3	805.3
15°	771.5	766.3	763.7	761.1	758.5	755.9	755.9	753.3
17.5°	719.6	717.0	714.4	711.8	706.6	704.0	701.4	698.8
20°	670.2	662.4	659.8	659.8	652.0	652.0	646.8	646.8
22.5°	618.3	610.5	610.5	607.9	602.7	597.5	597.5	594.9
25°	568.9	563.7	558.5	555.9	553.3	548.1	548.1	545.5
27.5°	519.5	514.3	511.7	509.2	504.0	501.4	498.8	496.2
30°	475.4	467.6	465.0	462.4	457.2	454.6	452.0	452.0
32.5°	431.2	423.4	423.4	418.2	415.6	410.4	407.8	407.8
35°	389.7	384.5	379.3	376.7	371.5	371.5	366.3	366.3
37.5°	348.1	342.9	342.9	337.7	332.5	329.9	327.3	324.7
40°	311.7	303.9	303.9	298.7	293.5	290.9	288.3	288.3
42.5°	275.4	267.6	265.0	262.4	257.2	252.0	252.0	249.4
45°	239.0	233.8	231.2	228.6	223.4	218.2	218.2	215.6
47.5°	205.2	202.6	197.4	194.8	192.2	187.0	184.4	184.4
50°	176.6	174.0	168.9	166.3	161.1	155.9	153.3	150.7
52.5°	148.1	145.5	142.9	140.3	135.1	129.9	127.3	124.7
55°	124.7	122.1	116.9	116.9	111.7	109.1	106.5	103.9
57.5°	101.3	98.7	96.1	96.1	93.5	93.5	93.5	93.5
60°	83.1	85.7	85.7	85.7	85.7	85.7	85.7	83.1
62.5°	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
65°	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
67.5°	54.6	54.6	57.1	54.6	54.6	54.6	54.6	54.6
70°	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.8
72.5°	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
75°	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
77.5°	26.0	26.0	23.4	23.4	26.0	26.0	23.4	26.0
80°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
82.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
85°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
87.5°	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

(END OF REPORT)