

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: P242016

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242016
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
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM HAZE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1569.8 lumens
Efficiency: N/A
Efficacy: 62.8 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

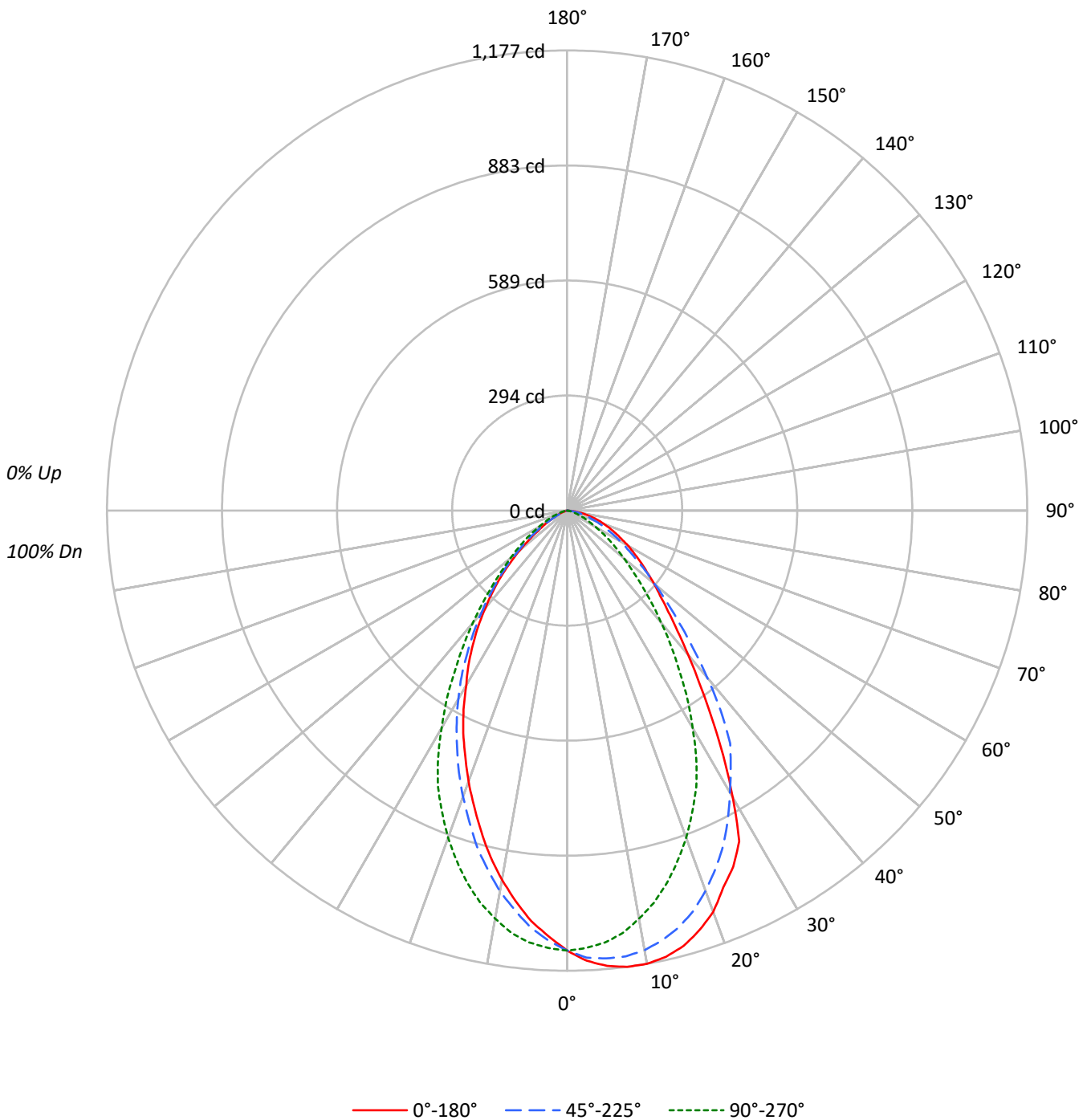
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	86134	86134	86134
5°	89821	85203	81000
10°	91489	82364	74514
15°	91336	78134	67309
20°	88990	72528	60065
25°	84887	65969	53055
30°	74835	56725	45624
35°	59971	46702	39302
40°	48032	37390	32474
45°	39619	28978	26012
50°	34474	22447	18862
55°	30613	17495	12024
60°	27602	12966	7945
65°	24741	9400	4944
70°	22626	6714	3066
75°	20199	4052	1627
80°	16838	2424	1190
85°	12032	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.5	6.7
10°-20°	278.6	17.7
20°-30°	366.7	23.4
30°-40°	340.4	21.7
40°-50°	237.7	15.1
50°-60°	139.6	8.9
60°-70°	69.3	4.4
70°-80°	27.9	1.8
80°-90°	5.1	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°	749.8	47.8
0°-40°	1090.1	69.4
0°-60°	1467.5	93.5
0°-90°	1569.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1569.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1125	1125	1125	1125	1125	
5°	1169	1150	1109	1071	1054	112
15°	1153	1103	986	890	849	323
25°	1005	945	781	666	628	457
35°	642	726	500	445	421	404
45°	366	404	268	248	240	287
55°	229	213	131	106	90	206
65°	137	109	52	22	27	136
75°	68	46	14	6	6	72
85°	14	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°	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3
2.5°	1152.6	1149.8	1149.8	1149.8	1149.8	1147.1	1147.1	1147.1	1144.4	1144.4	1144.4
5°	1169.0	1169.0	1166.2	1166.2	1163.5	1163.5	1163.5	1160.8	1158.0	1155.3	1149.8
7.5°	1177.1	1177.1	1174.4	1174.4	1171.7	1169.0	1169.0	1163.5	1160.8	1155.3	1149.8
10°	1177.1	1177.1	1174.4	1174.4	1169.0	1166.2	1166.2	1163.5	1155.3	1149.8	1141.6
12.5°	1169.0	1169.0	1166.2	1163.5	1160.8	1158.0	1155.3	1149.8	1141.6	1133.4	1125.3
15°	1152.6	1152.6	1149.8	1147.1	1141.6	1138.9	1136.2	1130.7	1122.5	1111.6	1103.4
17.5°	1125.3	1125.3	1122.5	1119.8	1117.1	1111.6	1108.9	1100.7	1092.5	1084.3	1073.4
20°	1092.5	1089.7	1089.7	1087.0	1081.6	1081.6	1076.1	1067.9	1059.7	1046.0	1035.1
22.5°	1043.3	1046.0	1046.0	1040.6	1035.1	1035.1	1029.7	1026.9	1016.0	1005.1	991.4
25°	1005.1	1002.3	1002.3	996.9	988.7	988.7	986.0	977.8	966.8	955.9	945.0
27.5°	953.2	950.5	950.5	950.5	942.3	942.3	936.8	925.9	915.0	906.8	890.4
30°	846.7	854.9	854.9	863.1	871.3	876.7	882.2	876.7	863.1	849.4	833.0
32.5°	742.9	748.3	753.8	762.0	772.9	781.1	789.3	797.5	808.4	794.8	778.4
35°	641.8	647.3	650.0	660.9	674.6	677.3	688.3	707.4	718.3	729.2	726.5
37.5°	554.4	557.2	562.6	570.8	581.7	589.9	598.1	611.8	630.9	647.3	644.6
40°	480.7	478.0	486.2	488.9	499.8	508.0	518.9	529.9	549.0	557.2	557.2
42.5°	417.9	417.9	420.6	426.1	434.3	439.7	445.2	456.1	472.5	475.2	475.2
45°	366.0	366.0	368.7	374.2	379.6	379.6	387.8	398.8	401.5	404.2	404.2
47.5°	322.3	325.0	325.0	327.7	330.5	335.9	338.7	344.1	344.1	344.1	344.1
50°	289.5	289.5	289.5	292.2	295.0	297.7	297.7	297.7	297.7	295.0	292.2
52.5°	256.7	256.7	256.7	259.5	259.5	262.2	262.2	259.5	256.7	254.0	251.3
55°	229.4	226.7	229.4	229.4	232.2	232.2	229.4	226.7	224.0	218.5	213.0
57.5°	202.1	202.1	202.1	202.1	204.8	202.1	202.1	199.4	193.9	188.5	183.0
60°	180.3	177.5	177.5	177.5	180.3	177.5	177.5	172.1	169.3	161.1	155.7
62.5°	155.7	155.7	155.7	158.4	155.7	155.7	152.9	147.5	144.8	139.3	133.8
65°	136.6	136.6	136.6	136.6	133.8	131.1	131.1	125.6	122.9	117.4	109.2
67.5°	117.4	117.4	117.4	117.4	114.7	112.0	112.0	106.5	103.8	98.3	92.9
70°	101.1	98.3	101.1	98.3	95.6	92.9	92.9	90.1	84.7	79.2	73.7
72.5°	84.7	84.7	84.7	81.9	79.2	76.5	76.5	71.0	68.3	65.5	60.1
75°	68.3	68.3	68.3	65.5	62.8	62.8	60.1	57.4	54.6	51.9	46.4
77.5°	51.9	51.9	51.9	51.9	49.2	46.4	46.4	43.7	41.0	38.2	35.5
80°	38.2	38.2	38.2	35.5	35.5	35.5	32.8	32.8	30.0	27.3	24.6
82.5°	24.6	24.6	24.6	24.6	21.8	21.8	21.8	19.1	19.1	16.4	13.7
85°	13.7	13.7	13.7	13.7	10.9	10.9	10.9	10.9	10.9	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3
2.5°	1141.6	1138.9	1136.2	1133.4	1133.4	1130.7	1128.0	1125.3	1122.5	1119.8	1119.8
5°	1147.1	1141.6	1138.9	1133.4	1130.7	1130.7	1125.3	1119.8	1114.3	1108.9	1103.4
7.5°	1144.4	1138.9	1130.7	1125.3	1122.5	1117.1	1111.6	1103.4	1095.2	1089.7	1081.6
10°	1133.4	1125.3	1117.1	1106.1	1103.4	1097.9	1089.7	1078.8	1070.6	1059.7	1051.5
12.5°	1117.1	1106.1	1095.2	1084.3	1078.8	1073.4	1062.4	1048.8	1037.9	1026.9	1013.3
15°	1089.7	1081.6	1065.2	1054.2	1046.0	1040.6	1026.9	1013.3	999.6	986.0	975.0
17.5°	1057.0	1046.0	1032.4	1016.0	1007.8	1002.3	986.0	966.8	953.2	939.5	928.6
20°	1024.2	1007.8	991.4	975.0	964.1	958.7	939.5	920.4	906.8	890.4	874.0
22.5°	980.5	961.4	945.0	925.9	917.7	906.8	890.4	868.5	849.4	835.7	816.6
25°	928.6	915.0	893.1	874.0	863.1	854.9	833.0	816.6	797.5	781.1	762.0
27.5°	876.7	857.6	841.2	822.1	808.4	797.5	778.4	756.5	737.4	715.6	699.2
30°	819.4	805.7	783.9	753.8	740.2	729.2	704.6	680.1	660.9	641.8	628.2
32.5°	762.0	734.7	710.1	682.8	669.1	658.2	630.9	611.8	589.9	573.6	559.9
35°	693.7	666.4	639.1	606.3	595.4	581.7	557.2	538.0	516.2	499.8	488.9
37.5°	625.4	592.7	562.6	538.0	527.1	510.7	488.9	467.0	450.6	437.0	423.3
40°	551.7	524.4	497.1	467.0	456.1	445.2	423.3	406.9	385.1	374.2	363.2
42.5°	469.8	458.8	431.5	406.9	393.3	382.4	360.5	344.1	330.5	319.6	308.6
45°	398.8	390.6	371.4	346.9	338.7	327.7	308.6	289.5	278.6	267.7	259.5
47.5°	338.7	330.5	316.8	295.0	284.0	275.9	259.5	245.8	234.9	224.0	218.5
50°	286.8	278.6	264.9	251.3	243.1	232.2	218.5	207.6	196.6	188.5	183.0
52.5°	243.1	234.9	221.2	210.3	204.8	196.6	183.0	174.8	163.9	158.4	152.9
55°	207.6	199.4	188.5	177.5	172.1	163.9	152.9	142.0	136.6	131.1	125.6
57.5°	177.5	166.6	158.4	150.2	144.8	136.6	125.6	120.2	112.0	106.5	101.1
60°	150.2	142.0	133.8	122.9	117.4	114.7	103.8	95.6	90.1	84.7	79.2
62.5°	125.6	117.4	109.2	101.1	98.3	92.9	84.7	76.5	71.0	65.5	62.8
65°	103.8	98.3	90.1	81.9	79.2	73.7	65.5	60.1	54.6	51.9	49.2
67.5°	87.4	79.2	73.7	65.5	62.8	60.1	51.9	46.4	43.7	41.0	35.5
70°	68.3	62.8	57.4	51.9	49.2	46.4	41.0	35.5	32.8	30.0	27.3
72.5°	54.6	49.2	43.7	38.2	35.5	35.5	30.0	27.3	24.6	21.8	19.1
75°	43.7	38.2	32.8	30.0	27.3	24.6	21.8	19.1	16.4	13.7	13.7
77.5°	30.0	27.3	24.6	19.1	19.1	16.4	13.7	13.7	10.9	10.9	8.2
80°	21.8	19.1	16.4	13.7	10.9	10.9	8.2	8.2	5.5	5.5	5.5
82.5°	13.7	10.9	8.2	8.2	8.2	5.5	5.5	5.5	2.7	2.7	2.7
85°	5.5	5.5	2.7	2.7	2.7	2.7	2.7	2.7	0.0	0.0	0.0
87.5°	2.7	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°	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3
2.5°	1117.1	1114.3	1111.6	1108.9	1108.9	1108.9	1103.4	1103.4	1100.7	1097.9	1097.9
5°	1100.7	1095.2	1089.7	1089.7	1084.3	1081.6	1078.8	1073.4	1070.6	1067.9	1065.2
7.5°	1073.4	1067.9	1059.7	1057.0	1054.2	1048.8	1040.6	1037.9	1029.7	1026.9	1024.2
10°	1043.3	1032.4	1026.9	1018.7	1018.7	1007.8	1002.3	994.2	988.7	983.2	977.8
12.5°	1005.1	991.4	980.5	977.8	972.3	961.4	955.9	945.0	939.5	934.1	928.6
15°	961.4	950.5	936.8	931.3	925.9	915.0	906.8	898.6	890.4	882.2	876.7
17.5°	912.2	901.3	884.9	879.4	876.7	863.1	852.1	841.2	833.0	827.6	819.4
20°	860.3	846.7	833.0	827.6	822.1	811.2	800.2	789.3	778.4	770.2	764.7
22.5°	803.0	786.6	775.7	770.2	764.7	751.1	742.9	732.0	723.8	715.6	710.1
25°	748.3	732.0	718.3	712.8	704.6	693.7	685.5	677.3	666.4	658.2	652.8
27.5°	685.5	669.1	658.2	655.5	647.3	639.1	628.2	617.3	611.8	603.6	598.1
30°	617.3	606.3	598.1	589.9	587.2	579.0	573.6	565.4	557.2	549.0	540.8
32.5°	546.2	538.0	527.1	527.1	524.4	518.9	513.5	508.0	502.5	497.1	488.9
35°	480.7	469.8	464.3	464.3	458.8	456.1	456.1	450.6	445.2	442.5	439.7
37.5°	415.1	409.7	401.5	401.5	398.8	398.8	396.0	393.3	393.3	393.3	390.6
40°	355.1	349.6	344.1	341.4	341.4	341.4	338.7	341.4	341.4	341.4	341.4
42.5°	300.4	297.7	292.2	292.2	292.2	292.2	292.2	292.2	292.2	295.0	295.0
45°	256.7	251.3	248.5	245.8	248.5	245.8	245.8	248.5	248.5	251.3	248.5
47.5°	213.0	213.0	207.6	207.6	207.6	207.6	207.6	207.6	207.6	207.6	210.3
50°	180.3	174.8	174.8	172.1	172.1	172.1	172.1	172.1	169.3	172.1	172.1
52.5°	150.2	144.8	144.8	142.0	142.0	139.3	139.3	136.6	136.6	136.6	136.6
55°	122.9	117.4	117.4	114.7	114.7	112.0	112.0	109.2	106.5	106.5	103.8
57.5°	98.3	92.9	92.9	90.1	90.1	87.4	84.7	81.9	79.2	79.2	76.5
60°	76.5	73.7	71.0	71.0	68.3	65.5	62.8	57.4	54.6	54.6	51.9
62.5°	60.1	57.4	54.6	51.9	51.9	46.4	43.7	38.2	35.5	32.8	35.5
65°	46.4	43.7	41.0	38.2	35.5	32.8	27.3	24.6	21.8	24.6	24.6
67.5°	32.8	30.0	27.3	27.3	24.6	21.8	16.4	16.4	16.4	16.4	19.1
70°	24.6	21.8	19.1	16.4	13.7	10.9	10.9	10.9	10.9	10.9	13.7
72.5°	16.4	13.7	10.9	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	10.9	8.2	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
77.5°	8.2	5.5	2.7	2.7	2.7	2.7	2.7	5.5	5.5	2.7	5.5
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
82.5°	0.0	0.0	0.0	2.7	2.7	0.0	2.7	2.7	0.0	2.7	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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3	1125.3
2.5°	1097.9	1095.2	1095.2	1092.5	1092.5	1095.2	1092.5	1089.7
5°	1059.7	1059.7	1059.7	1057.0	1054.2	1054.2	1054.2	1054.2
7.5°	1018.7	1016.0	1016.0	1016.0	1013.3	1007.8	1007.8	1007.8
10°	972.3	966.8	966.8	964.1	964.1	961.4	961.4	958.7
12.5°	923.1	917.7	915.0	912.2	909.5	906.8	909.5	906.8
15°	871.3	865.8	860.3	860.3	857.6	852.1	852.1	849.4
17.5°	813.9	805.7	805.7	803.0	797.5	797.5	794.8	792.0
20°	756.5	751.1	748.3	745.6	742.9	737.4	737.4	737.4
22.5°	699.2	693.7	691.0	691.0	688.3	682.8	682.8	680.1
25°	644.6	639.1	636.4	633.6	630.9	630.9	628.2	628.2
27.5°	592.7	584.5	584.5	579.0	576.3	573.6	573.6	573.6
30°	535.3	532.6	527.1	529.9	521.7	521.7	521.7	516.2
32.5°	483.4	480.7	478.0	478.0	472.5	469.8	472.5	469.8
35°	434.3	431.5	428.8	426.1	423.3	423.3	420.6	420.6
37.5°	387.8	382.4	379.6	379.6	376.9	376.9	374.2	374.2
40°	338.7	338.7	335.9	333.2	330.5	327.7	325.0	325.0
42.5°	295.0	292.2	289.5	289.5	286.8	281.3	281.3	281.3
45°	251.3	248.5	245.8	245.8	243.1	240.3	237.6	240.3
47.5°	207.6	207.6	207.6	204.8	202.1	199.4	196.6	196.6
50°	172.1	169.3	169.3	169.3	163.9	161.1	158.4	158.4
52.5°	136.6	133.8	133.8	133.8	131.1	125.6	122.9	122.9
55°	103.8	103.8	103.8	101.1	98.3	95.6	92.9	90.1
57.5°	73.7	73.7	73.7	73.7	73.7	73.7	71.0	71.0
60°	51.9	54.6	54.6	57.4	57.4	54.6	51.9	51.9
62.5°	38.2	41.0	41.0	41.0	41.0	38.2	38.2	38.2
65°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
67.5°	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
70°	13.7	13.7	13.7	13.7	13.7	13.7	10.9	13.7
72.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
77.5°	2.7	5.5	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
82.5°	2.7	2.7	2.7	0.0	0.0	0.0	0.0	2.7
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)