

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: P241685

Luminaire Tested: **PRS420D010-S4M12-44SNDMW**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241685  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-40)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-44SNDMW  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, SHALLOW TRIM MATTE WHITE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

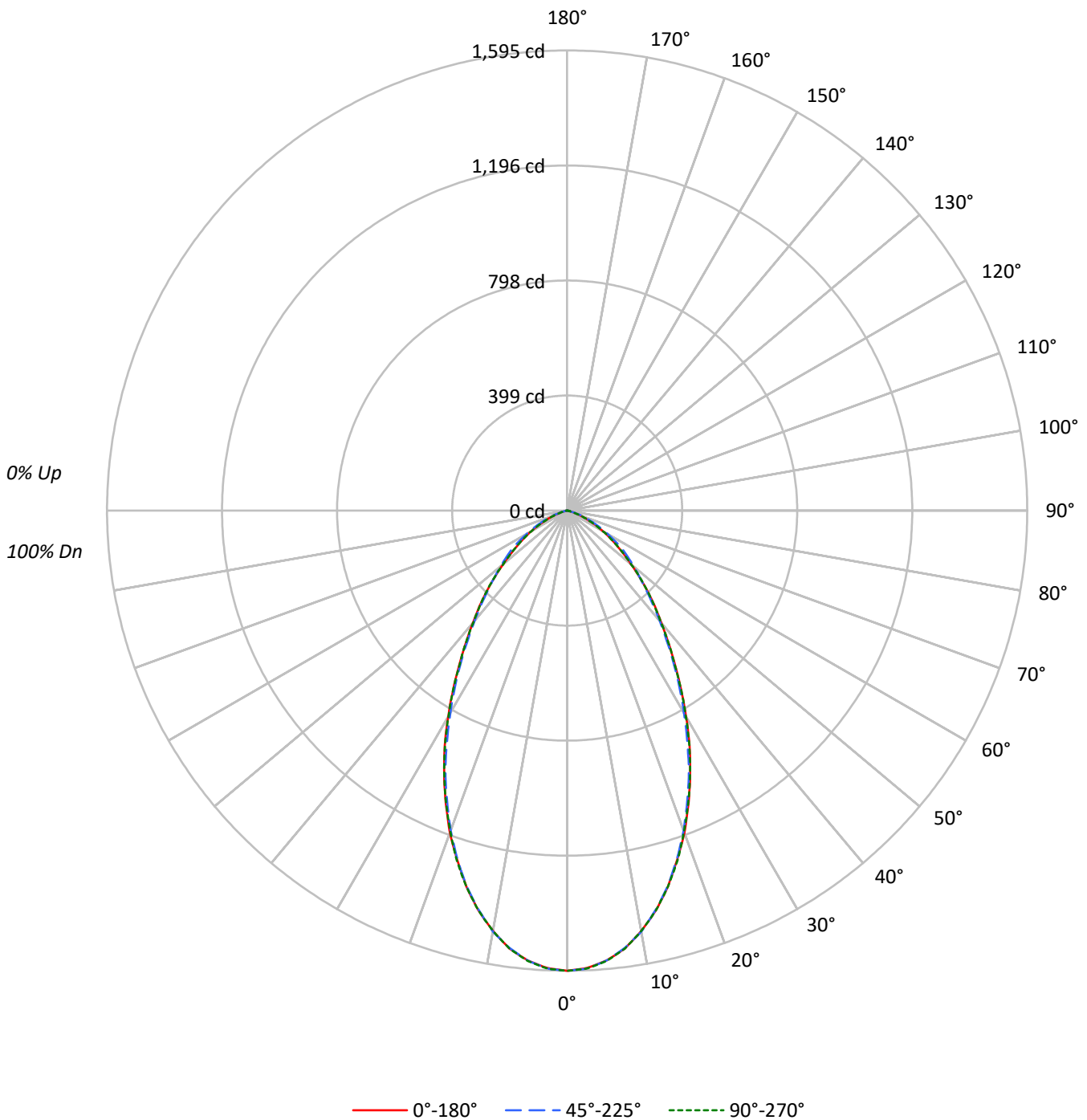
Lumens per Lamp: N/A  
Luminaire Lumens: 2006.9 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.94  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
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	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81					81			
3	98	89	83	78	95	88	82	78	85	80	76	83	78	75	80	77	74	72					72			
4	91	82	75	69	89	80	74	69	78	73	68	76	71	67	74	70	66	65					65			
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	56	51	73	63	56	51	62	55	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45					45			
9	67	55	48	43	65	55	48	43	54	47	43	53	47	43	52	47	43	41					41			
10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	43	40	38					38			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	122110	122110	122110
5°	120279	120279	120440
10°	115009	115172	115009
15°	106907	106733	106907
20°	96810	96110	96460
25°	85183	84279	85183
30°	72864	71539	72679
35°	60831	60027	60625
40°	50710	49850	50500
45°	42423	41719	42650
50°	34426	35950	34426
55°	27717	31147	28011
60°	21968	24586	21968
65°	15902	18619	15902
70°	9579	11973	9579
75°	3164	5057	3164
80°	2821	2821	2821
85°	1844	1844	1844



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.8	7.3
10°-20°	376.1	18.7
20°-30°	459.0	22.9
30°-40°	405.7	20.2
40°-50°	302.7	15.1
50°-60°	196.4	9.8
60°-70°	96.7	4.8
70°-80°	21.0	1.0
80°-90°	2.6	0.1
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°	981.8	48.9
0°-40°	1387.5	69.1
0°-60°	1886.6	94.0
0°-90°	2006.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2006.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1595	1595	1595	1595	1595	
5°	1565	1565	1565	1568	1568	147
15°	1349	1349	1347	1349	1349	376
25°	1009	1006	998	1004	1009	462
35°	651	647	642	647	649	409
45°	392	392	385	390	394	303
55°	208	214	233	216	210	188
65°	88	98	103	96	88	89
75°	11	13	17	13	11	18
85°	2	2	2	2	2	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1595.3	1595.3	1595.3	1595.3	1595.3
2.5°	1586.8	1586.8	1588.9	1588.9	1588.9
5°	1565.4	1565.4	1565.4	1567.5	1567.5
7.5°	1531.1	1528.9	1528.9	1531.1	1531.1
10°	1479.7	1479.7	1481.8	1477.6	1479.7
12.5°	1419.7	1419.7	1417.6	1419.7	1419.7
15°	1349.1	1349.1	1346.9	1349.1	1349.1
17.5°	1267.7	1267.7	1265.6	1269.8	1272.0
20°	1188.5	1186.3	1179.9	1184.2	1184.2
22.5°	1098.5	1096.4	1087.8	1094.2	1096.4
25°	1008.6	1006.5	997.9	1004.3	1008.6
27.5°	918.7	910.1	901.5	912.2	916.5
30°	824.4	818.0	809.4	818.0	822.3
32.5°	734.5	732.4	723.8	730.2	734.5
35°	651.0	646.7	642.4	646.7	648.8
37.5°	576.0	571.8	565.3	571.8	576.0
40°	507.5	503.2	498.9	501.1	505.4
42.5°	449.7	445.4	439.0	443.3	447.5
45°	391.9	391.9	385.4	389.7	394.0
47.5°	338.3	342.6	340.5	342.6	340.5
50°	289.1	297.7	301.9	297.7	289.1
52.5°	246.3	252.7	265.5	252.7	246.3
55°	207.7	214.1	233.4	216.3	209.9
57.5°	175.6	182.0	197.0	182.0	175.6
60°	143.5	152.0	160.6	152.0	143.5
62.5°	115.6	124.2	130.6	124.2	113.5
65°	87.8	98.5	102.8	96.4	87.8
67.5°	64.2	72.8	77.1	72.8	64.2
70°	42.8	51.4	53.5	51.4	42.8
72.5°	25.7	32.1	32.1	30.0	25.7
75°	10.7	12.8	17.1	12.8	10.7
77.5°	8.6	8.6	8.6	8.6	8.6
80°	6.4	6.4	6.4	6.4	6.4
82.5°	4.3	4.3	4.3	4.3	4.3
85°	2.1	2.1	2.1	2.1	2.1
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)