

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: P241862

Luminaire Tested: **PRS440D010-S4M24-41SNDMW-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241862  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-52)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS440D010-S4M24-41SNDMW-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM MATTE WHITE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2983.2 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.93  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

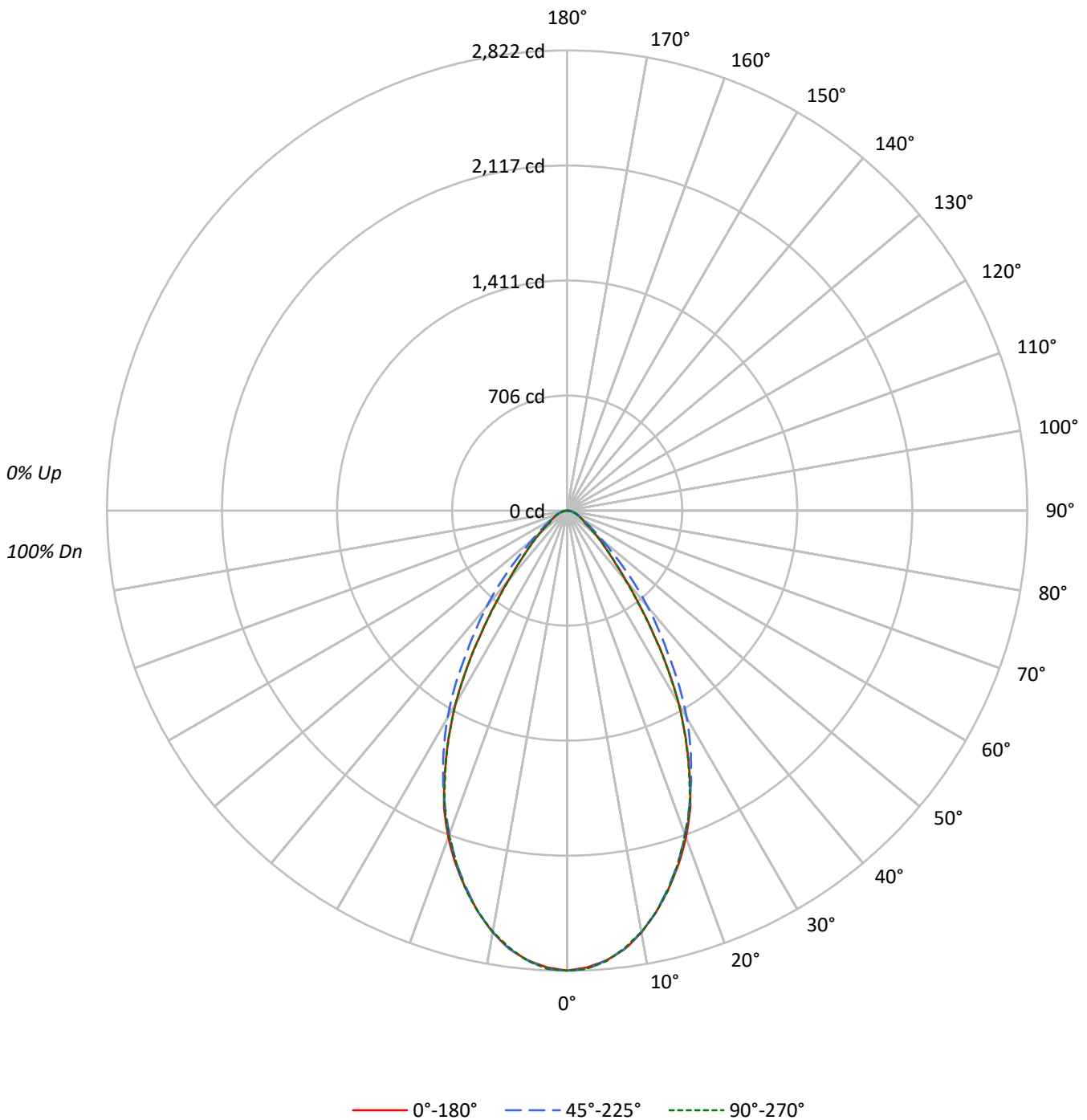
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91					91			
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83					83			
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77	75					75			
4	94	85	79	74	92	84	78	73	81	76	72	79	75	71	77	74	71	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	66	72	68	65	63					63			
6	83	73	66	61	82	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	79	68	61	57	77	67	61	57	66	60	56	65	60	56	64	59	56	54					54			
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	49	58	53	49	57	52	48	56	52	48	47					47			
10	67	56	50	46	66	56	50	46	55	49	45	54	49	45	53	49	45	44					44			

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

	0°	45°	90°
0°	215967	215967	215967
5°	212720	212720	212989
10°	204181	203909	203909
15°	190248	189685	190525
20°	173664	171937	172515
25°	149901	151996	149310
30°	120937	129687	120937
35°	86228	101432	85574
40°	56175	76669	55466
45°	37508	51667	37887
50°	26948	32842	26531
55°	17936	23127	17936
60°	16243	17314	16243
65°	14725	14725	14725
70°	13450	13450	13450
75°	11504	11504	11504
80°	10932	10932	10932
85°	9309	9309	9309



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	259.9	8.7
10°-20°	670.0	22.5
20°-30°	814.5	27.3
30°-40°	630.4	21.1
40°-50°	324.7	10.9
50°-60°	147.0	4.9
60°-70°	81.5	2.7
70°-80°	42.9	1.4
80°-90°	12.4	0.4
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°	1744.3	58.5
0°-40°	2374.7	79.6
0°-60°	2846.4	95.4
0°-90°	2983.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2983.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2822	2822	2822	2822	2822	
5°	2768	2776	2768	2772	2772	260
15°	2401	2401	2394	2397	2404	671
25°	1775	1796	1800	1793	1768	808
35°	923	1015	1086	1011	916	580
45°	346	400	477	400	350	280
55°	134	156	173	156	134	133
65°	81	81	81	81	81	80
75°	39	39	39	39	39	43
85°	11	11	11	11	11	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2821.5	2821.5	2821.5	2821.5	2821.5
2.5°	2803.8	2807.4	2814.4	2810.9	2810.9
5°	2768.5	2775.5	2768.5	2772.0	2772.0
7.5°	2711.9	2711.9	2711.9	2704.8	2704.8
10°	2627.0	2623.5	2623.5	2623.5	2623.5
12.5°	2521.0	2524.5	2521.0	2524.5	2521.0
15°	2400.8	2400.8	2393.7	2397.2	2404.3
17.5°	2273.5	2269.9	2262.9	2259.3	2262.9
20°	2132.0	2121.4	2110.8	2117.9	2117.9
22.5°	1972.9	1969.4	1958.8	1962.3	1965.9
25°	1774.9	1796.1	1799.7	1792.6	1767.9
27.5°	1573.4	1598.1	1637.0	1598.1	1573.4
30°	1368.3	1407.2	1467.3	1407.2	1368.3
32.5°	1145.6	1216.3	1283.5	1219.8	1142.0
35°	922.8	1014.8	1085.5	1011.2	915.8
37.5°	724.8	813.2	919.3	816.8	721.3
40°	562.2	643.5	767.3	643.5	555.1
42.5°	438.4	509.1	618.8	505.6	438.4
45°	346.5	399.5	477.3	399.5	350.0
47.5°	282.9	321.8	360.6	321.8	282.9
50°	226.3	254.6	275.8	254.6	222.8
52.5°	176.8	201.5	215.7	201.5	176.8
55°	134.4	155.6	173.3	155.6	134.4
57.5°	120.2	123.8	141.4	123.8	120.2
60°	106.1	106.1	113.1	106.1	106.1
62.5°	91.9	95.5	95.5	95.5	91.9
65°	81.3	81.3	81.3	81.3	81.3
67.5°	67.2	70.7	70.7	70.7	67.2
70°	60.1	60.1	60.1	60.1	60.1
72.5°	49.5	49.5	49.5	49.5	49.5
75°	38.9	38.9	38.9	38.9	38.9
77.5°	31.8	31.8	31.8	31.8	31.8
80°	24.8	24.8	24.8	24.8	24.8
82.5°	17.7	17.7	17.7	17.7	17.7
85°	10.6	10.6	10.6	10.6	10.6
87.5°	3.5	3.5	3.5	7.1	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)