

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: P241823

Luminaire Tested: **PRS410D010-S4M12-41SNDMB-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241823  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-49)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SNDMB-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 633.6 lumens  
Efficiency: N/A  
Efficacy: 63.4 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.89  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

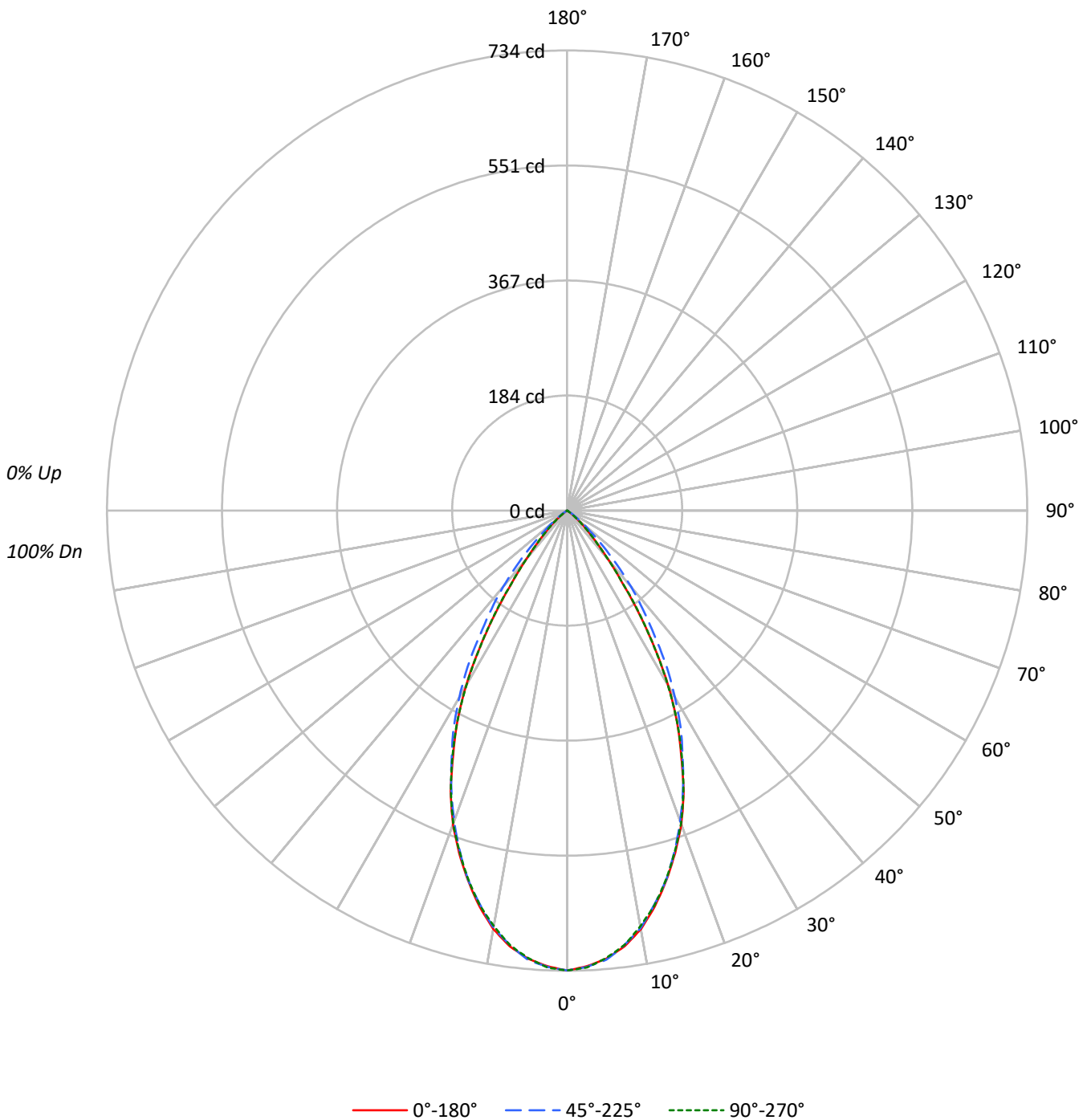
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	113	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	106	101	98	94	98	95	92	95	93	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	84	82	81					81			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75					75			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70					70			
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	69	66	65					65			
7	83	74	67	63	82	73	67	63	72	66	63	70	66	62	69	65	62	61					61			
8	79	69	63	59	78	69	63	59	67	62	59	66	62	58	65	61	58	57					57			
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53					53			
10	71	62	56	52	70	61	56	52	60	55	52	60	55	51	59	54	51	50					50			

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

	0°	45°	90°
0°	56145	56145	56145
5°	55114	55268	55037
10°	52681	52526	52293
15°	48426	48346	48267
20°	43351	42935	43261
25°	36316	36823	36570
30°	28522	30404	28345
35°	18530	22594	18716
40°	10212	15867	10012
45°	5034	8985	5261
50°	2286	3977	2286
55°	133	1481	133
60°	0	306	153
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.2	10.6
10°-20°	170.0	26.8
20°-30°	198.0	31.3
30°-40°	138.4	21.8
40°-50°	51.8	8.2
50°-60°	8.1	1.3
60°-70°	0.1	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	435.2	68.7
0°-40°	573.5	90.5
0°-60°	633.4	100.0
0°-90°	633.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	633.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	717	718	719	716	716	67
15°	611	611	610	610	609	170
25°	430	436	436	437	433	196
35°	198	221	242	222	200	125
45°	46	61	83	61	49	39
55°	1	6	11	7	1	4
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	733.5	733.5	733.5	733.5	733.5
2.5°	727.4	727.4	728.4	728.4	729.4
5°	717.3	718.3	719.3	716.3	716.3
7.5°	701.1	700.1	699.1	699.1	699.1
10°	677.8	676.8	675.8	673.8	672.8
12.5°	646.5	645.5	643.5	644.5	644.5
15°	611.1	611.1	610.1	610.1	609.1
17.5°	572.6	571.6	569.6	570.6	570.6
20°	532.2	530.1	527.1	528.1	531.1
22.5°	485.6	486.6	482.6	484.6	484.6
25°	430.0	436.0	436.0	437.1	433.0
27.5°	379.4	383.4	392.5	382.4	379.4
30°	322.7	330.8	344.0	329.8	320.7
32.5°	260.0	276.2	295.4	277.2	260.0
35°	198.3	220.6	241.8	221.6	200.3
37.5°	142.7	167.9	198.3	170.0	144.7
40°	102.2	124.4	158.8	124.4	100.2
42.5°	69.8	87.0	118.4	88.0	69.8
45°	46.5	60.7	83.0	60.7	48.6
47.5°	31.4	41.5	53.6	41.5	31.4
50°	19.2	27.3	33.4	27.3	19.2
52.5°	9.1	15.2	19.2	15.2	9.1
55°	1.0	6.1	11.1	7.1	1.0
57.5°	1.0	1.0	6.1	1.0	1.0
60°	0.0	1.0	2.0	1.0	1.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
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)