

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: P241828

Luminaire Tested: **PRS410D010-S4M12-41SMDMB-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241828  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-50)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SMDMB-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 643.9 lumens  
Efficiency: N/A  
Efficacy: 64.4 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.98  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

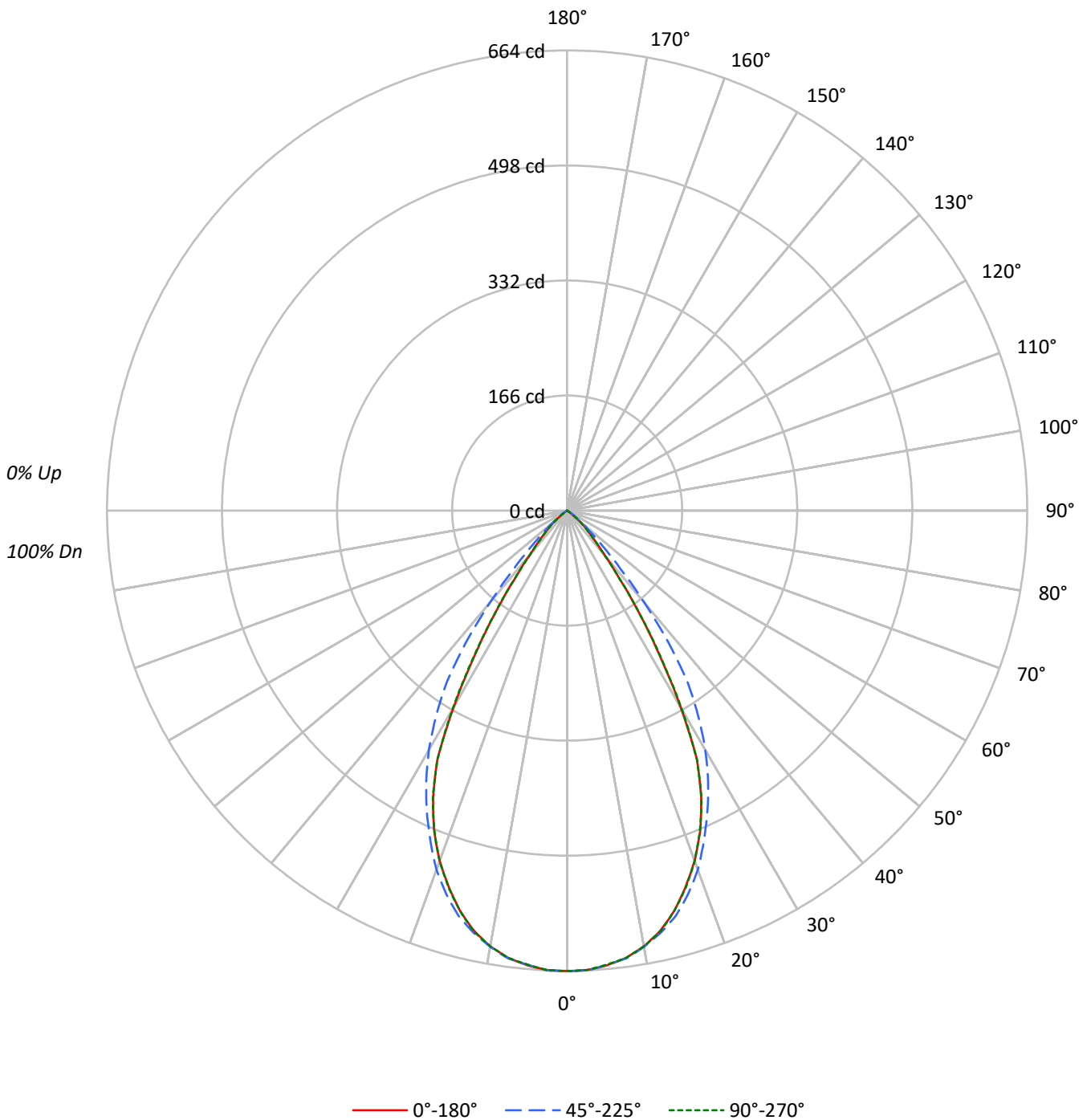
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	84	82	80					80			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75					75			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	68	86	77	72	67	76	71	67	74	70	66	73	69	66	65					65			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60					60			
8	78	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56					56			
9	75	65	59	55	74	64	59	55	63	58	54	62	58	54	62	57	54	53					53			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	49					49			

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

	0°	45°	90°
0°	50855	50855	50855
5°	50612	50535	50535
10°	49619	49689	49619
15°	47372	47982	47372
20°	43815	44923	43815
25°	38664	40455	38740
30°	29026	35257	29282
35°	17053	28341	17147
40°	8493	17176	8393
45°	4709	7740	4709
50°	2298	3215	2298
55°	133	1415	133
60°	153	291	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°	62.2	9.7
10°-20°	168.0	26.1
20°-30°	212.8	33.1
30°-40°	146.0	22.7
40°-50°	47.1	7.3
50°-60°	7.7	1.2
60°-70°	0.2	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°	443.0	68.8
0°-40°	589.0	91.5
0°-60°	643.7	100.0
0°-90°	643.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	643.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	659	660	658	660	658	62
15°	598	602	606	602	598	167
25°	458	471	479	470	459	205
35°	182	225	303	227	184	117
45°	44	54	72	53	44	36
55°	1	6	11	6	1	5
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°	664.4	664.4	664.4	664.4	664.4
2.5°	663.5	663.5	664.4	663.5	663.5
5°	658.7	659.6	657.7	659.6	657.7
7.5°	650.9	650.0	651.9	650.0	650.9
10°	638.4	637.4	639.3	637.4	638.4
12.5°	621.0	622.0	623.9	622.9	622.0
15°	597.8	601.7	605.5	601.7	597.8
17.5°	568.8	573.7	580.4	573.7	569.8
20°	537.9	542.8	551.5	543.7	537.9
22.5°	501.2	510.9	515.7	509.9	500.3
25°	457.8	471.3	479.0	470.3	458.7
27.5°	405.6	426.9	440.4	426.9	405.6
30°	328.4	369.9	398.9	369.9	331.3
32.5°	249.2	297.5	352.5	295.5	252.1
35°	182.5	225.0	303.3	227.0	183.5
37.5°	124.6	162.2	239.5	160.3	125.5
40°	85.0	112.0	171.9	111.1	84.0
42.5°	59.9	76.3	114.0	76.3	58.9
45°	43.5	54.1	71.5	53.1	43.5
47.5°	31.9	39.6	44.4	38.6	30.9
50°	19.3	27.0	27.0	27.0	19.3
52.5°	8.7	15.5	16.4	15.5	8.7
55°	1.0	5.8	10.6	5.8	1.0
57.5°	1.0	1.0	5.8	1.0	1.0
60°	1.0	1.0	1.9	1.0	1.0
62.5°	0.0	0.0	1.0	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)