

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: P241918

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241918  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-56)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SMDH-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, DEEP TRIM HAZE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 859.2 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.95 / 0.98  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

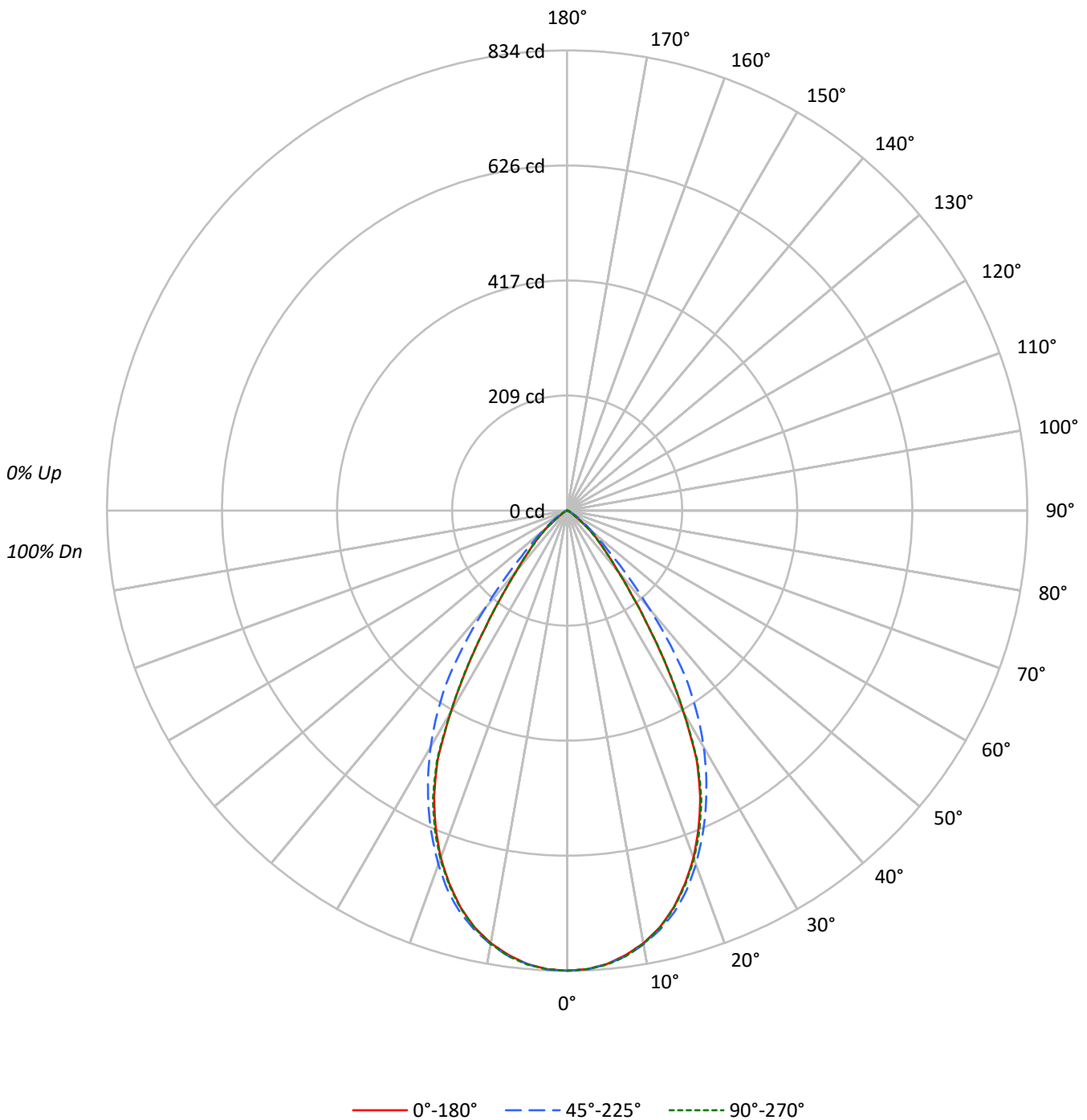
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93					93			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85					85			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	82	86	83	80	79					79			
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73					73			
5	90	82	75	71	89	81	75	71	79	74	70	77	73	69	76	72	69	67					67			
6	86	76	70	65	84	75	69	65	74	68	65	72	68	64	71	67	64	62					62			
7	81	71	65	60	80	71	64	60	69	64	60	68	63	60	67	62	59	58					58			
8	77	67	60	56	76	66	60	56	65	60	56	64	59	55	63	59	55	54					54			
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	52	50					50			
10	69	59	53	49	68	59	53	49	58	52	49	57	52	49	56	52	48	47					47			

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

	0°	45°	90°
0°	63822	63822	63822
5°	63397	63397	63466
10°	61876	62032	61954
15°	59036	59647	59116
20°	54551	55577	54706
25°	48165	50201	48571
30°	37272	43750	37360
35°	23987	35620	23987
40°	14269	23042	14179
45°	9190	12535	9190
50°	5633	7014	5513
55°	2322	3990	2322
60°	1485	2067	1485
65°	869	1232	869
70°	649	873	649
75°	562	562	296
80°	441	441	441
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	9.1
10°-20°	209.2	24.3
20°-30°	265.1	30.9
30°-40°	193.7	22.5
40°-50°	80.5	9.4
50°-60°	24.3	2.8
60°-70°	6.2	0.7
70°-80°	2.0	0.2
80°-90°	0.3	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°	552.2	64.3
0°-40°	745.9	86.8
0°-60°	850.7	99.0
0°-90°	859.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	859.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	825	825	825	825	826	78
15°	745	749	753	749	746	208
25°	570	584	594	588	575	257
35°	257	301	381	301	257	164
45°	85	98	116	96	85	68
55°	17	24	30	24	17	19
65°	5	6	7	6	5	5
75°	2	2	2	2	1	2
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°	833.8	833.8	833.8	833.8	833.8
2.5°	831.8	831.8	832.8	831.8	831.8
5°	825.1	825.1	825.1	825.1	826.0
7.5°	812.5	813.5	814.5	813.5	814.5
10°	796.1	797.1	798.1	798.1	797.1
12.5°	773.9	775.9	777.8	775.9	774.9
15°	745.0	748.8	752.7	748.8	746.0
17.5°	709.3	713.1	720.9	714.1	711.2
20°	669.7	675.5	682.3	676.5	671.6
22.5°	622.4	633.0	639.8	633.0	626.3
25°	570.3	583.8	594.4	587.7	575.1
27.5°	507.6	530.8	546.2	533.6	510.5
30°	421.7	462.2	495.0	466.1	422.7
32.5°	337.8	380.2	440.0	382.1	339.7
35°	256.7	301.1	381.2	301.1	256.7
37.5°	192.0	231.6	307.8	228.7	192.0
40°	142.8	172.7	230.6	170.8	141.9
42.5°	110.0	128.3	166.9	127.4	109.0
45°	84.9	97.5	115.8	96.5	84.9
47.5°	65.6	74.3	82.0	74.3	64.7
50°	47.3	56.0	58.9	56.0	46.3
52.5°	29.9	39.6	42.5	38.6	30.9
55°	17.4	24.1	29.9	24.1	17.4
57.5°	12.5	14.5	21.2	14.5	12.5
60°	9.7	10.6	13.5	10.6	9.7
62.5°	6.8	7.7	8.7	7.7	6.8
65°	4.8	5.8	6.8	5.8	4.8
67.5°	3.9	4.8	4.8	4.8	3.9
70°	2.9	2.9	3.9	2.9	2.9
72.5°	1.9	1.9	2.9	2.9	1.9
75°	1.9	1.9	1.9	1.9	1.0
77.5°	1.0	1.0	1.9	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0
82.5°	0.0	1.0	1.0	1.0	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)