

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: P252953

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P252953  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1805-776-2)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SWDH-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, DEEP TRIM HAZE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 840.3 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.1 / 1.15  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

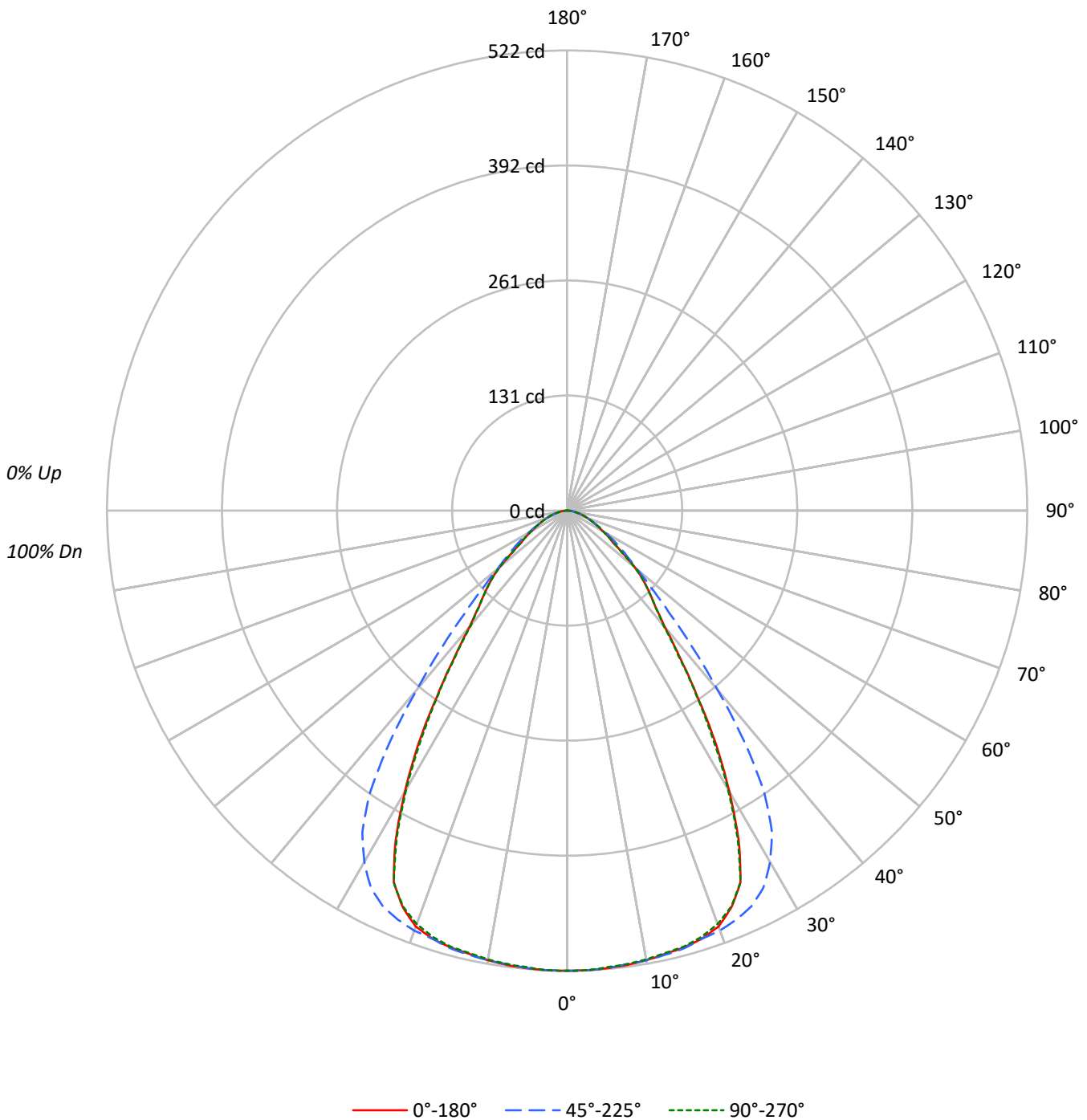
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92					90				
2	104	98	93	88	102	96	91	87	93	89	86	90	86	84	87	84	82					80				
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73					72				
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66					64				
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60					58				
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55					53				
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50					48				
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46					44				
9	66	55	48	43	65	54	47	43	53	47	43	52	47	42	51	46	42					41				
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39					38				

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

	0°	45°	90°
0°	39956	39956	39956
5°	40031	40031	39955
10°	40261	40261	40183
15°	40652	40731	40573
20°	40899	41298	40655
25°	39298	41814	39298
30°	32517	40683	32252
35°	24061	36414	23874
40°	17186	26529	16986
45°	14310	17655	14310
50°	11956	12313	11956
55°	8487	9822	8621
60°	7149	7762	7149
65°	6122	6303	6122
70°	5349	5349	5349
75°	4702	4702	4702
80°	3923	3923	3923
85°	3513	3513	3513



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.6	5.9
10°-20°	144.9	17.2
20°-30°	216.6	25.8
30°-40°	192.8	22.9
40°-50°	114.7	13.7
50°-60°	65.0	7.7
60°-70°	34.9	4.1
70°-80°	17.1	2.0
80°-90°	4.7	0.6
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°	411.2	48.9
0°-40°	604.0	71.9
0°-60°	783.7	93.3
0°-90°	840.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	522	522	522	522	522	
5°	521	521	521	521	520	50
15°	513	513	514	512	512	145
25°	465	478	495	477	465	208
35°	258	301	390	300	256	163
45°	132	142	163	141	132	103
55°	64	71	74	71	65	61
65°	34	35	35	35	34	34
75°	16	16	16	16	16	17
85°	4	4	4	4	4	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	522.0	522.0	522.0	522.0	522.0
2.5°	522.0	522.0	522.0	522.0	522.0
5°	521.0	521.0	521.0	521.0	520.0
7.5°	520.0	519.0	519.0	519.0	519.0
10°	518.0	518.0	518.0	517.0	517.0
12.5°	515.0	515.0	516.0	515.0	514.0
15°	513.0	513.0	514.0	512.0	512.0
17.5°	509.0	510.0	509.0	509.0	507.0
20°	502.1	505.1	507.0	504.1	499.1
22.5°	487.2	495.1	502.1	494.1	486.2
25°	465.3	478.2	495.1	477.2	465.3
27.5°	421.5	454.4	482.2	451.4	418.6
30°	367.9	407.6	460.3	404.6	364.9
32.5°	314.2	353.9	432.5	352.0	309.2
35°	257.5	301.2	389.7	300.3	255.5
37.5°	209.8	249.5	330.1	247.6	207.8
40°	172.0	202.8	265.5	201.8	170.0
42.5°	148.1	165.0	209.8	164.0	148.1
45°	132.2	142.2	163.1	141.2	132.2
47.5°	117.3	125.3	128.3	124.3	117.3
50°	100.4	109.4	103.4	109.4	100.4
52.5°	79.5	90.5	86.5	91.5	78.5
55°	63.6	70.6	73.6	70.6	64.6
57.5°	55.7	57.7	61.6	57.7	55.7
60°	46.7	48.7	50.7	48.7	46.7
62.5°	39.8	41.8	41.8	41.8	40.8
65°	33.8	34.8	34.8	34.8	33.8
67.5°	28.8	28.8	28.8	28.8	28.8
70°	23.9	23.9	23.9	23.9	23.9
72.5°	19.9	19.9	19.9	19.9	19.9
75°	15.9	15.9	15.9	15.9	15.9
77.5°	12.9	12.9	11.9	12.9	11.9
80°	8.9	8.9	8.9	8.9	8.9
82.5°	7.0	7.0	7.0	7.0	7.0
85°	4.0	4.0	4.0	4.0	4.0
87.5°	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)