

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: P252973

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P252973  
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-S4M12-41SWDMB-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WIDE 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: 541.9 lumens  
Efficiency: N/A  
Efficacy: 54.2 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

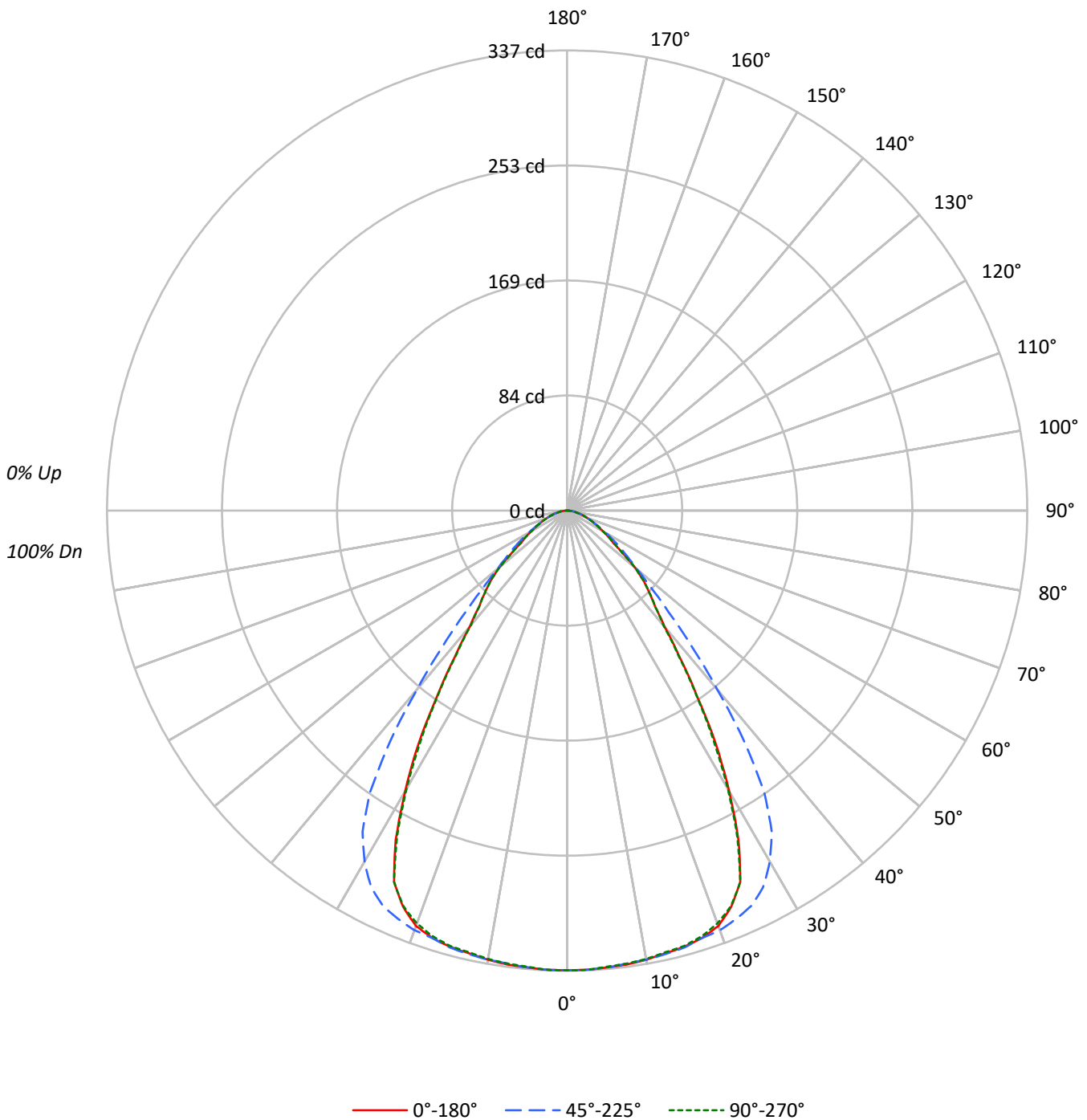
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	25765	25765	25765
5°	25809	25809	25763
10°	25960	25960	25913
15°	26214	26261	26166
20°	26367	26636	26212
25°	25337	26967	25337
30°	20965	26233	20797
35°	15511	23482	15399
40°	11081	17106	10951
45°	9234	11377	9234
50°	7705	7943	7705
55°	5471	6325	5565
60°	4608	5006	4608
65°	3948	4057	3948
70°	3446	3446	3446
75°	3046	3046	3046
80°	2557	2557	2557
85°	2283	2283	2283



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.0	5.9
10°-20°	93.5	17.2
20°-30°	139.7	25.8
30°-40°	124.3	22.9
40°-50°	74.0	13.7
50°-60°	41.9	7.7
60°-70°	22.5	4.1
70°-80°	11.0	2.0
80°-90°	3.1	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°	265.1	48.9
0°-40°	389.4	71.9
0°-60°	505.3	93.3
0°-90°	541.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	541.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	337	337	337	337	337	
5°	336	336	336	336	335	32
15°	331	331	331	330	330	93
25°	300	308	319	308	300	134
35°	166	194	251	194	165	105
45°	85	92	105	91	85	66
55°	41	46	47	46	42	39
65°	22	22	22	22	22	22
75°	10	10	10	10	10	11
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	336.6	336.6	336.6	336.6	336.6
2.5°	336.6	336.6	336.6	336.6	336.6
5°	335.9	335.9	335.9	335.9	335.3
7.5°	335.3	334.6	334.6	334.6	334.6
10°	334.0	334.0	334.0	333.4	333.4
12.5°	332.1	332.1	332.7	332.1	331.4
15°	330.8	330.8	331.4	330.2	330.2
17.5°	328.2	328.9	328.2	328.2	327.0
20°	323.7	325.7	327.0	325.0	321.8
22.5°	314.1	319.3	323.7	318.6	313.5
25°	300.0	308.4	319.3	307.7	300.0
27.5°	271.8	293.0	310.9	291.1	269.9
30°	237.2	262.8	296.8	260.9	235.3
32.5°	202.6	228.2	278.9	226.9	199.4
35°	166.0	194.2	251.3	193.6	164.8
37.5°	135.3	160.9	212.8	159.6	134.0
40°	110.9	130.8	171.2	130.1	109.6
42.5°	95.5	106.4	135.3	105.8	95.5
45°	85.3	91.7	105.1	91.0	85.3
47.5°	75.6	80.8	82.7	80.1	75.6
50°	64.7	70.5	66.7	70.5	64.7
52.5°	51.3	58.3	55.8	59.0	50.6
55°	41.0	45.5	47.4	45.5	41.7
57.5°	35.9	37.2	39.7	37.2	35.9
60°	30.1	31.4	32.7	31.4	30.1
62.5°	25.6	26.9	26.9	26.9	26.3
65°	21.8	22.4	22.4	22.4	21.8
67.5°	18.6	18.6	18.6	18.6	18.6
70°	15.4	15.4	15.4	15.4	15.4
72.5°	12.8	12.8	12.8	12.8	12.8
75°	10.3	10.3	10.3	10.3	10.3
77.5°	8.3	8.3	7.7	8.3	7.7
80°	5.8	5.8	5.8	5.8	5.8
82.5°	4.5	4.5	4.5	4.5	4.5
85°	2.6	2.6	2.6	2.6	2.6
87.5°	1.3	1.3	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)