

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: P241948

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241948  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-58)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SNDC-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM SPECULAR  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 819.7 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 0.8 / 0.79 / 0.83  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

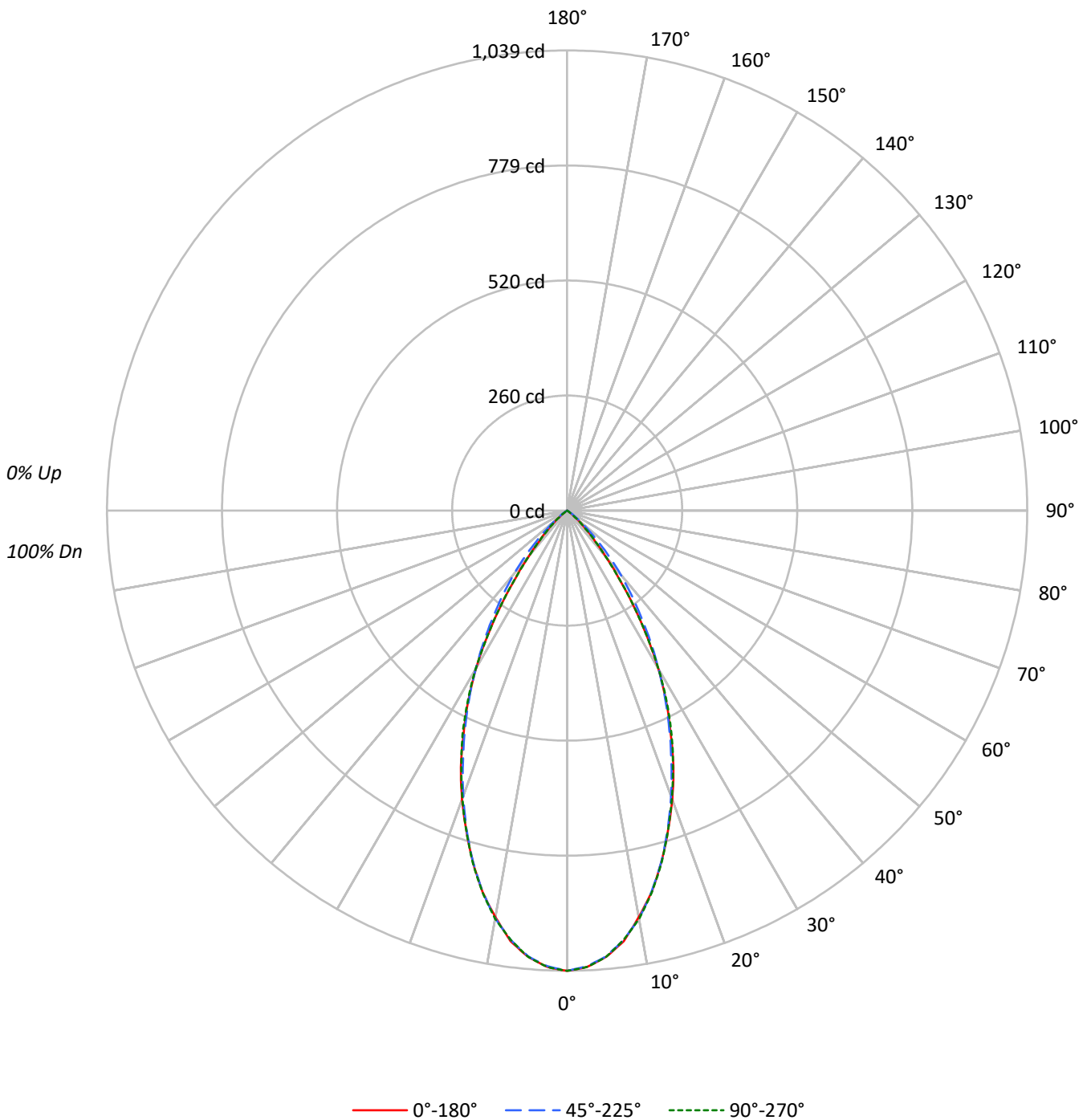
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	87	85	83
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72
6	88	79	73	69	86	78	73	68	77	72	68	75	71	68	74	70	67
7	83	74	68	64	82	74	68	64	72	67	63	71	67	63	70	66	63
8	79	70	64	60	78	69	64	60	68	63	59	67	63	59	66	62	59
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	55
10	72	62	57	53	71	62	57	53	61	56	53	60	56	52	60	55	52

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

	0°	45°	90°
0°	79544	79544	79544
5°	77704	77627	77704
10°	72447	72672	72750
15°	65146	65075	65225
20°	56514	55887	56359
25°	46696	46130	47186
30°	36335	36414	36503
35°	24258	26874	24342
40°	13599	18605	13399
45°	6895	10652	6690
50°	2870	4716	2870
55°	133	1802	133
60°	153	444	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°	94.1	11.5
10°-20°	228.3	27.9
20°-30°	251.6	30.7
30°-40°	171.7	21.0
40°-50°	64.0	7.8
50°-60°	9.7	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°	574.0	70.0
0°-40°	745.7	91.0
0°-60°	819.4	100.0
0°-90°	819.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	819.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1039	1039	1039	1039	1039	
5°	1011	1011	1010	1010	1011	94
15°	822	821	821	821	823	229
25°	553	553	546	554	559	253
35°	260	275	288	276	260	162
45°	64	76	98	74	62	53
55°	1	8	14	8	1	6
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°	1039.2	1039.2	1039.2	1039.2	1039.2
2.5°	1031.5	1031.5	1029.6	1029.6	1031.5
5°	1011.3	1011.3	1010.3	1010.3	1011.3
7.5°	980.4	978.4	977.5	978.4	977.5
10°	932.1	933.1	935.0	935.0	936.0
12.5°	882.0	881.0	881.0	882.9	882.9
15°	822.1	821.2	821.2	821.2	823.1
17.5°	757.5	757.5	754.6	756.5	757.5
20°	693.8	690.9	686.1	691.9	691.9
22.5°	627.2	622.4	614.7	623.3	624.3
25°	552.9	552.9	546.2	553.9	558.7
27.5°	483.4	479.6	479.6	482.5	487.3
30°	411.1	412.0	412.0	413.0	413.0
32.5°	332.9	343.5	349.3	343.5	332.9
35°	259.6	275.0	287.6	276.0	260.5
37.5°	189.1	211.3	234.5	210.4	190.1
40°	136.1	156.3	186.2	154.4	134.1
42.5°	92.6	111.0	139.9	108.1	92.6
45°	63.7	76.2	98.4	74.3	61.8
47.5°	41.5	51.1	63.7	50.2	41.5
50°	24.1	32.8	39.6	30.9	24.1
52.5°	11.6	18.3	23.2	18.3	11.6
55°	1.0	7.7	13.5	7.7	1.0
57.5°	1.0	1.0	6.8	1.0	1.0
60°	1.0	1.0	2.9	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)