

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: P241973

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241973  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-59)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-41SMDC-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, DEEP TRIM SPECULAR  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 951.4 lumens  
Efficiency: N/A  
Efficacy: 95.1 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.85  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

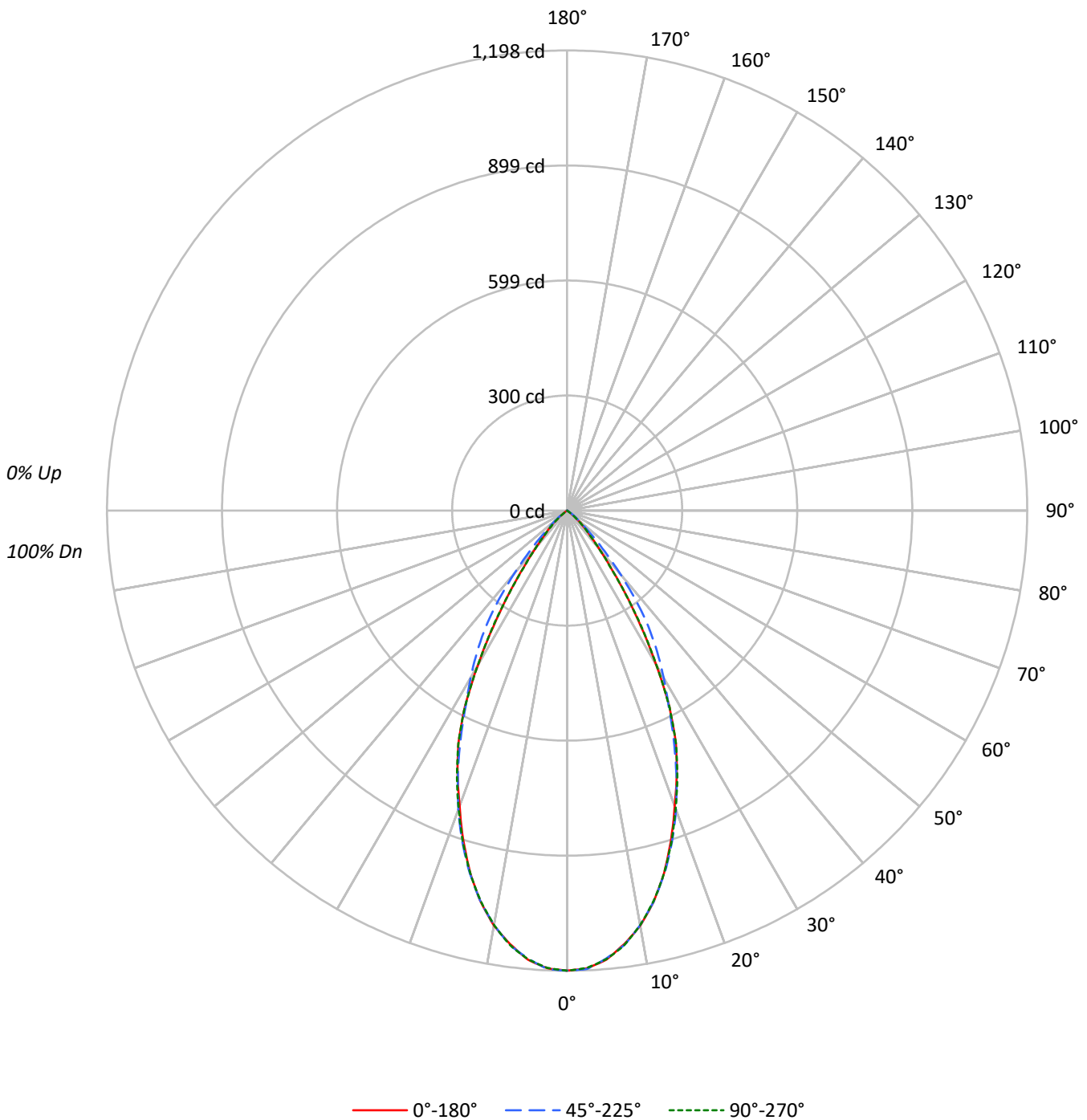
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94				94
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87				87
3	103	96	92	88	101	95	91	87	92	89	86	90	87	84	88	85	83	81				81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76				76
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71				71
6	88	79	73	69	87	79	73	69	77	72	69	76	71	68	74	71	68	66				66
7	84	75	69	65	83	74	68	64	73	68	64	72	67	64	70	66	63	62				62
8	80	70	65	61	79	70	64	60	69	64	60	68	63	60	67	63	60	58				58
9	76	67	61	57	75	66	61	57	65	60	57	64	60	56	63	59	56	55				55
10	73	63	57	54	72	63	57	53	62	57	53	61	56	53	60	56	53	52				52

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

	0°	45°	90°
0°	91684	91684	91684
5°	90167	89936	90090
10°	85310	85155	85155
15°	77358	77516	77358
20°	66663	67486	67242
25°	56560	55361	56560
30°	41134	44351	41037
35°	24669	34499	24575
40°	12840	21223	12740
45°	7004	10078	6787
50°	3132	4215	3013
55°	267	1762	133
60°	153	459	153
65°	0	181	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°	109.5	11.5
10°-20°	271.2	28.5
20°-30°	302.3	31.8
30°-40°	194.6	20.5
40°-50°	63.5	6.7
50°-60°	9.9	1.0
60°-70°	0.5	0.1
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°	682.9	71.8
0°-40°	877.5	92.2
0°-60°	950.9	99.9
0°-90°	951.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	951.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1174	1174	1170	1174	1172	109
15°	976	976	978	978	976	271
25°	670	669	656	669	670	300
35°	264	304	369	304	263	169
45°	65	74	93	72	63	53
55°	2	8	13	8	1	6
65°	0	0	1	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°	1197.8	1197.8	1197.8	1197.8	1197.8
2.5°	1192.7	1193.7	1194.7	1193.7	1191.7
5°	1173.5	1173.5	1170.5	1174.5	1172.5
7.5°	1138.1	1139.1	1141.1	1139.1	1141.1
10°	1097.6	1095.6	1095.6	1095.6	1095.6
12.5°	1042.0	1041.0	1042.0	1041.0	1041.0
15°	976.2	976.2	978.2	978.2	976.2
17.5°	899.3	901.4	906.4	905.4	903.4
20°	818.4	822.5	828.5	823.5	825.5
22.5°	745.6	741.5	743.5	741.5	749.6
25°	669.7	668.7	655.5	668.7	669.7
27.5°	576.6	590.8	571.6	591.8	576.6
30°	465.4	500.8	501.8	504.8	464.3
32.5°	357.1	398.6	436.0	400.6	361.2
35°	264.0	304.5	369.2	303.5	263.0
37.5°	184.1	220.5	292.4	219.5	182.1
40°	128.5	152.8	212.4	153.8	127.5
42.5°	90.0	106.2	144.7	103.2	89.0
45°	64.7	73.8	93.1	71.8	62.7
47.5°	44.5	51.6	57.7	50.6	43.5
50°	26.3	34.4	35.4	34.4	25.3
52.5°	12.1	19.2	22.3	19.2	12.1
55°	2.0	8.1	13.2	8.1	1.0
57.5°	1.0	1.0	7.1	1.0	1.0
60°	1.0	1.0	3.0	1.0	1.0
62.5°	1.0	1.0	1.0	1.0	1.0
65°	0.0	0.0	1.0	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)