

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: P241658

Luminaire Tested: **PRS410D010-S4M12-44SMDMB-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241658  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-38)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS410D010-S4M12-44SMDMB-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SHALLOW TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 937.2 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

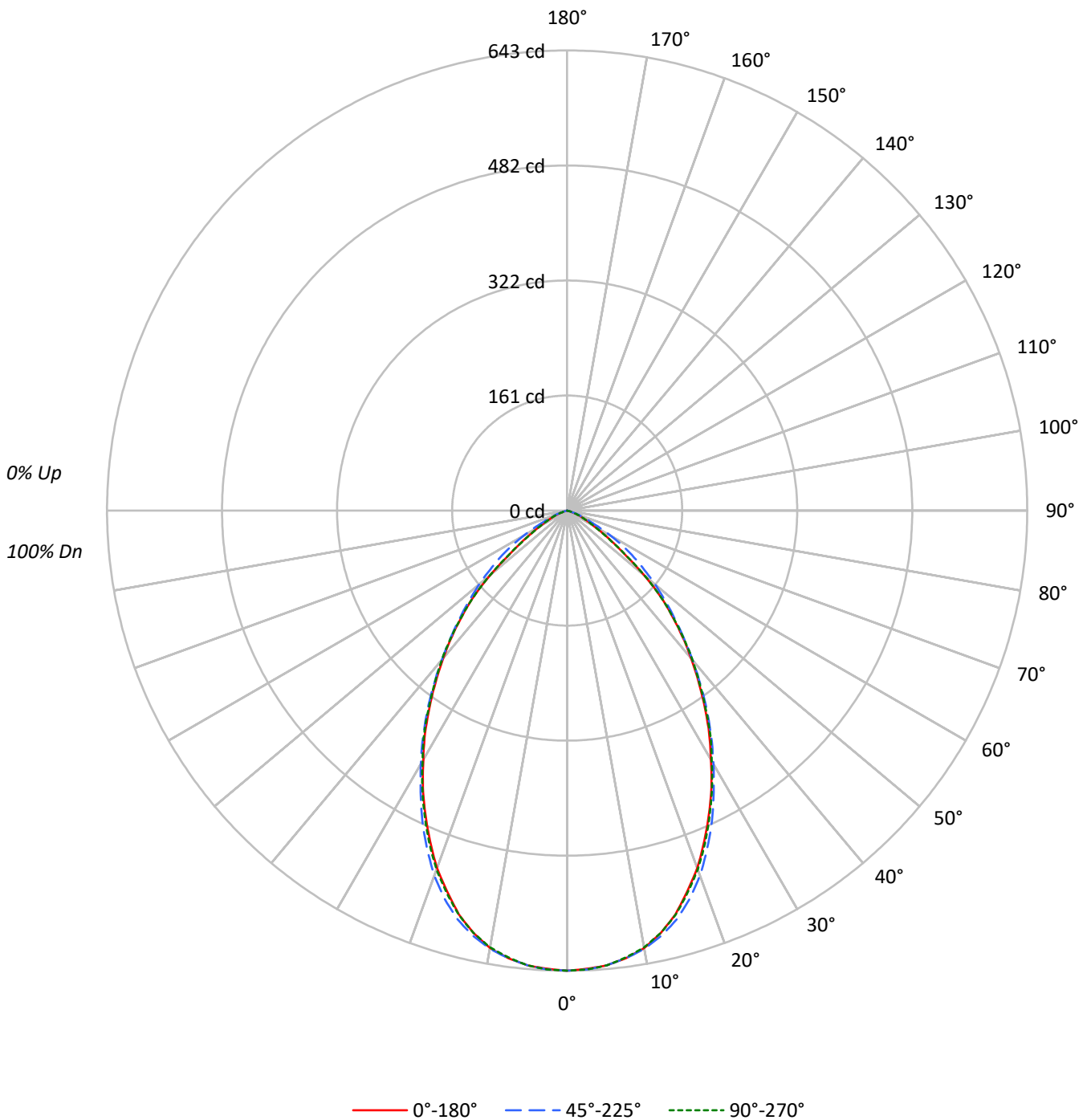
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	106	103	110	107	104	101	103	100	98	99	97	95	95	94	93	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	91	82	75	70	89	81	74	70	78	73	69	76	72	68	74	70	67	65					65			
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59					59			
6	80	69	62	56	78	68	61	56	66	60	56	65	60	55	64	59	55	53					53			
7	75	64	56	51	73	63	56	51	62	55	51	60	55	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	48	43	53	47	43	52	47	43	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°	49210	49210	49210
5°	49006	49006	49006
10°	48236	48313	48158
15°	46294	46857	46373
20°	43294	44206	43465
25°	39593	40446	39762
30°	35522	36149	35707
35°	31312	31789	31499
40°	26909	27218	27218
45°	22353	22905	22472
50°	16636	19053	16755
55°	10542	15267	10409
60°	6659	10701	6506
65°	4401	6049	4401
70°	2484	3178	2484
75°	0	887	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.3	6.4
10°-20°	164.4	17.5
20°-30°	217.6	23.2
30°-40°	212.0	22.6
40°-50°	162.3	17.3
50°-60°	86.5	9.2
60°-70°	30.1	3.2
70°-80°	3.9	0.4
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°	442.4	47.2
0°-40°	654.4	69.8
0°-60°	903.3	96.4
0°-90°	937.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	937.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	638	638	638	638	638	60
15°	584	588	591	588	585	163
25°	469	476	479	476	471	215
35°	335	340	340	342	337	209
45°	206	211	212	213	208	158
55°	79	91	114	92	78	74
65°	24	29	33	28	24	25
75°	0	1	3	1	0	3
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°	642.9	642.9	642.9	642.9	642.9
2.5°	640.9	640.9	641.9	640.9	641.9
5°	637.8	637.8	637.8	637.8	637.8
7.5°	630.8	630.8	630.8	630.8	629.7
10°	620.6	620.6	621.6	620.6	619.6
12.5°	604.4	606.5	608.5	607.5	604.4
15°	584.2	588.2	591.3	588.2	585.2
17.5°	557.9	562.9	569.0	563.9	559.9
20°	531.5	535.6	542.7	537.6	533.6
22.5°	500.2	506.2	511.3	508.3	503.2
25°	468.8	475.9	478.9	475.9	470.8
27.5°	436.4	441.4	443.5	444.5	438.4
30°	401.9	408.0	409.0	410.0	404.0
32.5°	369.5	374.6	374.6	377.6	372.6
35°	335.1	340.2	340.2	342.2	337.1
37.5°	301.7	306.8	305.8	308.8	303.7
40°	269.3	273.4	272.4	274.4	272.4
42.5°	237.9	242.0	241.0	243.0	240.0
45°	206.5	210.6	211.6	212.6	207.6
47.5°	176.2	181.2	184.3	183.3	176.2
50°	139.7	151.9	160.0	153.9	140.7
52.5°	104.3	121.5	135.7	122.5	106.3
55°	79.0	91.1	114.4	92.1	78.0
57.5°	58.7	68.8	92.1	67.8	57.7
60°	43.5	51.6	69.9	50.6	42.5
62.5°	32.4	38.5	48.6	37.5	32.4
65°	24.3	29.4	33.4	28.3	24.3
67.5°	18.2	21.3	22.3	21.3	17.2
70°	11.1	14.2	14.2	14.2	11.1
72.5°	5.1	7.1	8.1	7.1	5.1
75°	0.0	1.0	3.0	1.0	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)