

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: P241660

Luminaire Tested: **PRS420D010-S4M12-44SMDMB-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241660  
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: PRS420D010-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: 2007.4 lumens  
Efficiency: N/A  
Efficacy: 100.4 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

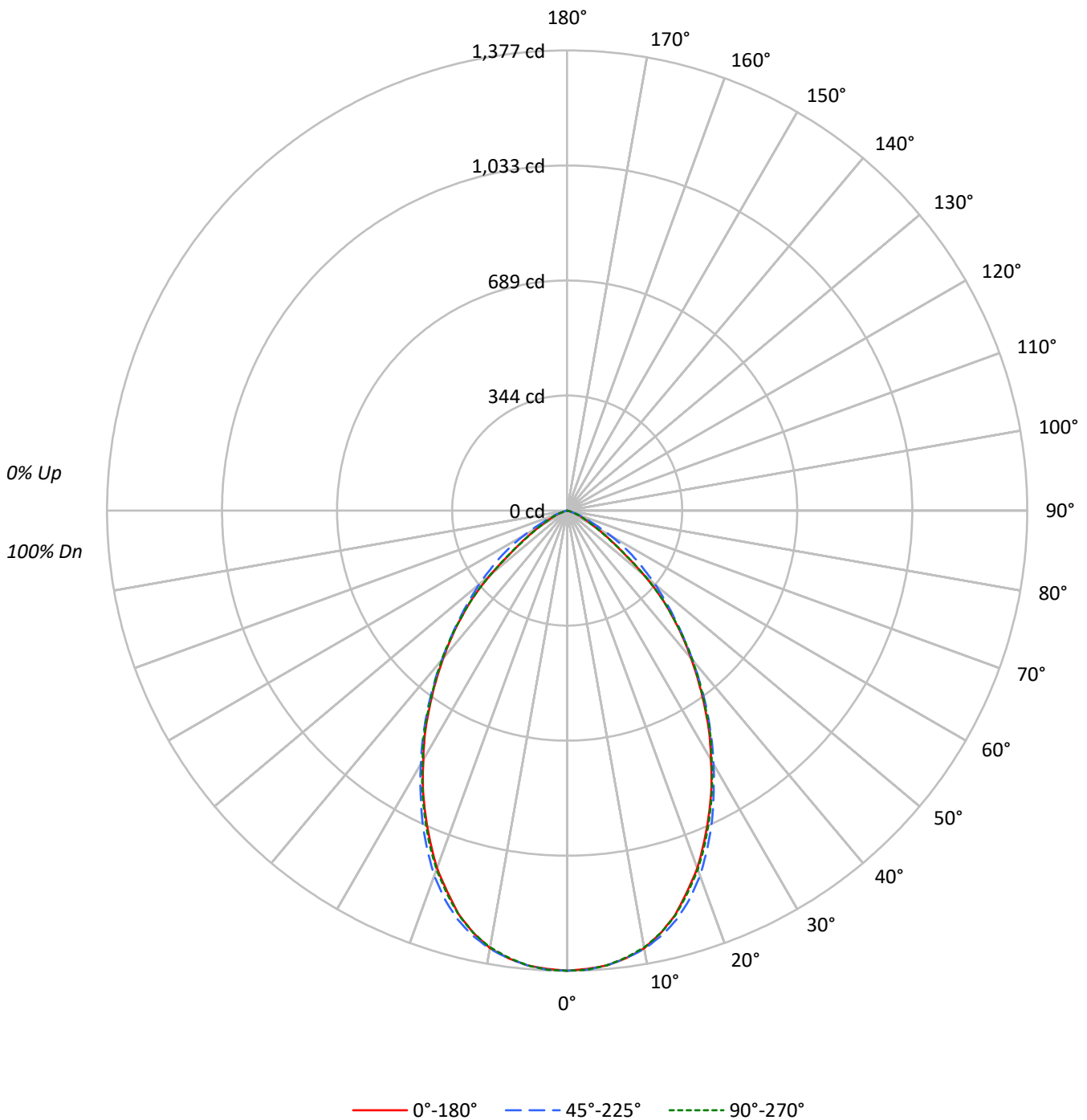
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	105400	105400	105400
5°	104973	104973	104973
10°	103319	103490	103156
15°	99157	100354	99324
20°	92737	94676	93088
25°	84794	86627	85166
30°	76090	77434	76479
35°	67073	68082	67475
40°	57634	58284	58284
45°	47889	49058	48127
50°	35641	40797	35891
55°	22566	32695	22286
60°	14268	22902	13946
65°	9418	12968	9418
70°	5349	6803	5349
75°	0	1922	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	6.4
10°-20°	352.2	17.5
20°-30°	466.1	23.2
30°-40°	454.0	22.6
40°-50°	347.7	17.3
50°-60°	185.4	9.2
60°-70°	64.5	3.2
70°-80°	8.3	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°	947.5	47.2
0°-40°	1401.6	69.8
0°-60°	1934.6	96.4
0°-90°	2007.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2007.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1377	1377	1377	1377	1377	
5°	1366	1366	1366	1366	1366	129
15°	1251	1260	1266	1260	1253	350
25°	1004	1019	1026	1019	1008	460
35°	718	729	729	733	722	448
45°	442	451	453	455	445	339
55°	169	195	245	197	167	159
65°	52	63	72	61	52	54
75°	0	2	6	2	0	6
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°	1377.0	1377.0	1377.0	1377.0	1377.0
2.5°	1372.7	1372.7	1374.9	1372.7	1374.9
5°	1366.2	1366.2	1366.2	1366.2	1366.2
7.5°	1351.0	1351.0	1351.0	1351.0	1348.8
10°	1329.3	1329.3	1331.5	1329.3	1327.2
12.5°	1294.6	1299.0	1303.3	1301.1	1294.6
15°	1251.3	1259.9	1266.4	1259.9	1253.4
17.5°	1194.9	1205.7	1218.7	1207.9	1199.2
20°	1138.5	1147.2	1162.3	1151.5	1142.8
22.5°	1071.3	1084.3	1095.1	1088.6	1077.8
25°	1004.0	1019.2	1025.7	1019.2	1008.4
27.5°	934.6	945.5	949.8	952.0	939.0
30°	860.9	873.9	876.1	878.3	865.3
32.5°	791.5	802.4	802.4	808.9	798.0
35°	717.8	728.6	728.6	733.0	722.1
37.5°	646.2	657.1	654.9	661.4	650.6
40°	576.8	585.5	583.3	587.7	583.3
42.5°	509.6	518.3	516.1	520.5	513.9
45°	442.4	451.1	453.2	455.4	444.6
47.5°	377.3	388.2	394.7	392.5	377.3
50°	299.3	325.3	342.6	329.6	301.4
52.5°	223.4	260.2	290.6	262.4	227.7
55°	169.1	195.2	245.0	197.3	167.0
57.5°	125.8	147.5	197.3	145.3	123.6
60°	93.2	110.6	149.6	108.4	91.1
62.5°	69.4	82.4	104.1	80.2	69.4
65°	52.0	62.9	71.6	60.7	52.0
67.5°	39.0	45.5	47.7	45.5	36.9
70°	23.9	30.4	30.4	30.4	23.9
72.5°	10.8	15.2	17.3	15.2	10.8
75°	0.0	2.2	6.5	2.2	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)