

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: P241650

Luminaire Tested: **PRS420D010-S4M12-44SMDMB-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241650  
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-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SHALLOW 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: 1914.8 lumens  
Efficiency: N/A  
Efficacy: 95.7 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

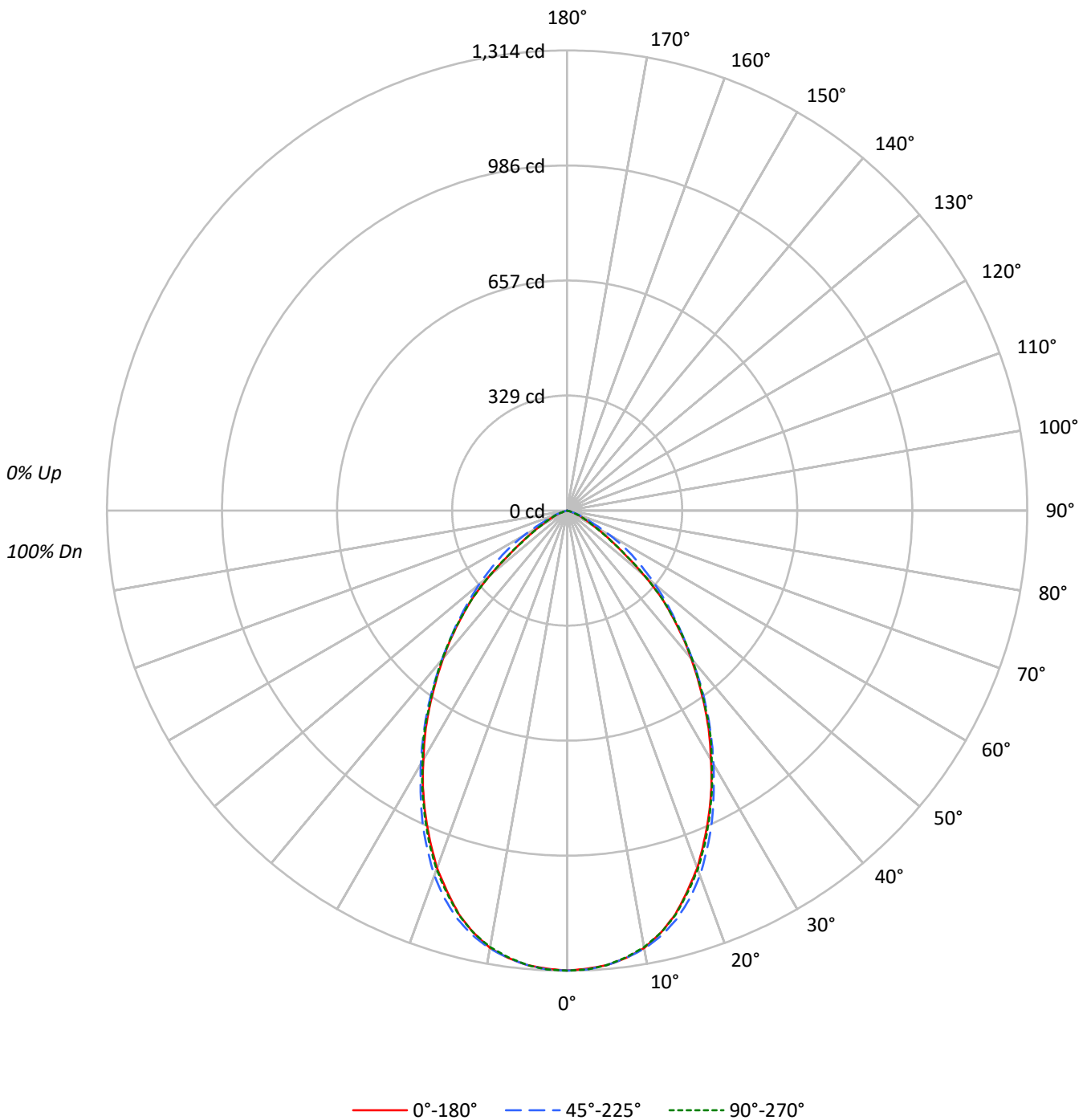
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	100540	100540	100540
5°	100125	100125	100125
10°	98554	98710	98391
15°	94577	95726	94744
20°	88453	90310	88795
25°	80884	82632	81230
30°	72582	73863	72944
35°	63980	64942	64363
40°	54976	55596	55596
45°	45681	46796	45897
50°	33986	38915	34236
55°	21525	31187	21258
60°	13609	21845	13303
65°	8983	12370	8983
70°	5103	6490	5103
75°	0	1834	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.3	6.4
10°-20°	335.9	17.5
20°-30°	444.6	23.2
30°-40°	433.1	22.6
40°-50°	331.6	17.3
50°-60°	176.8	9.2
60°-70°	61.5	3.2
70°-80°	7.9	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°	903.8	47.2
0°-40°	1336.9	69.8
0°-60°	1845.4	96.4
0°-90°	1914.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1914.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1314	1314	1314	1314	1314	
5°	1303	1303	1303	1303	1303	123
15°	1194	1202	1208	1202	1196	334
25°	958	972	978	972	962	439
35°	685	695	695	699	689	427
45°	422	430	432	434	424	324
55°	161	186	234	188	159	151
65°	50	60	68	58	50	51
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°	<i>1313.5</i>	<i>1313.5</i>	<i>1313.5</i>	<i>1313.5</i>	<i>1313.5</i>
2.5°	<i>1309.3</i>	1309.3	1311.4	1309.3	1311.4
5°	<i>1303.1</i>	1303.1	1303.1	1303.1	1303.1
7.5°	<i>1288.7</i>	1288.7	1288.7	1288.7	1286.6
10°	<i>1268.0</i>	1268.0	1270.0	1268.0	1265.9
12.5°	<i>1234.9</i>	1239.0	1243.1	1241.1	1234.9
15°	<i>1193.5</i>	1201.8	1208.0	1201.8	1195.6
17.5°	<i>1139.7</i>	1150.1	1162.5	1152.1	1143.9
20°	<i>1085.9</i>	1094.2	1108.7	1098.4	1090.1
22.5°	<i>1021.8</i>	1034.2	1044.6	1038.4	1028.0
25°	<i>957.7</i>	972.2	978.4	972.2	961.8
27.5°	<i>891.5</i>	901.8	906.0	908.1	895.6
30°	<i>821.2</i>	833.6	835.7	837.7	825.3
32.5°	<i>755.0</i>	765.3	765.3	771.5	761.2
35°	<i>684.7</i>	695.0	695.0	699.1	688.8
37.5°	<i>616.4</i>	626.7	624.7	630.9	620.5
40°	<i>550.2</i>	558.5	556.4	560.6	556.4
42.5°	<i>486.1</i>	494.4	492.3	496.4	490.2
45°	<i>422.0</i>	430.2	432.3	434.4	424.0
47.5°	<i>359.9</i>	370.3	376.5	374.4	359.9
50°	<i>285.4</i>	310.3	326.8	314.4	287.5
52.5°	<i>213.1</i>	248.2	277.2	250.3	217.2
55°	<i>161.3</i>	186.2	233.7	188.2	159.3
57.5°	<i>120.0</i>	140.7	188.2	138.6	117.9
60°	<i>88.9</i>	105.5	142.7	103.4	86.9
62.5°	<i>66.2</i>	78.6	99.3	76.5	66.2
65°	<i>49.6</i>	60.0	68.3	57.9	49.6
67.5°	<i>37.2</i>	43.4	45.5	43.4	35.2
70°	<i>22.8</i>	29.0	29.0	29.0	22.8
72.5°	<i>10.3</i>	14.5	16.5	14.5	10.3
75°	<i>0.0</i>	2.1	6.2	2.1	0.0
77.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
80°	<i>0.0</i>	0.0	0.0	0.0	0.0
82.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
85°	<i>0.0</i>	0.0	0.0	0.0	0.0
87.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)