

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: P241815

Luminaire Tested: **PRS420D010-S4M12-41SNDMB-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-49)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-41SNDMB-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP 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: 1294.4 lumens  
Efficiency: N/A  
Efficacy: 64.7 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.89  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

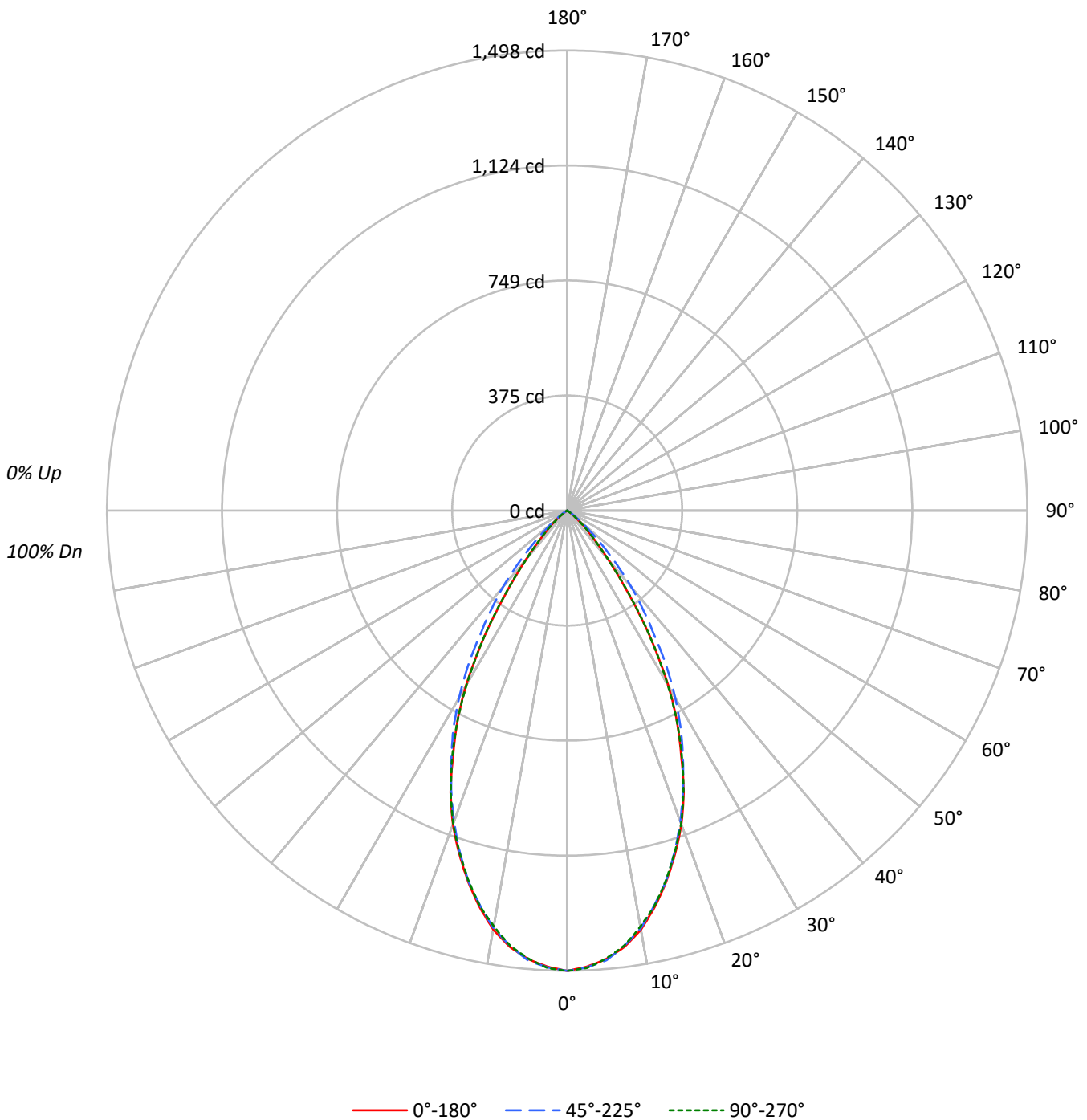
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	113	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	106	101	98	94	98	95	92	95	93	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	84	82	81					81			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75					75			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70					70			
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	69	66	65					65			
7	83	74	67	63	82	73	67	63	72	66	63	70	66	62	69	65	62	61					61			
8	79	69	63	59	78	69	63	59	67	62	59	66	62	58	65	61	58	57					57			
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53					53			
10	71	62	56	52	70	61	56	52	60	55	52	60	55	51	59	54	51	50					50			

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

	0°	45°	90°
0°	114700	114700	114700
5°	112603	112918	112441
10°	107640	107314	106832
15°	98928	98769	98603
20°	88559	87720	88388
25°	74195	75242	74718
30°	58281	62117	57910
35°	37853	46160	38246
40°	20863	32424	20444
45°	10294	18348	10738
50°	4680	8121	4680
55°	280	3029	280
60°	0	628	321
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°	137.2	10.6
10°-20°	347.2	26.8
20°-30°	404.6	31.3
30°-40°	282.7	21.8
40°-50°	105.7	8.2
50°-60°	16.6	1.3
60°-70°	0.3	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°	889.1	68.7
0°-40°	1171.8	90.5
0°-60°	1294.1	100.0
0°-90°	1294.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1294.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1498	1498	1498	1498	1498	
5°	1466	1468	1470	1463	1463	137
15°	1248	1248	1246	1246	1244	348
25°	878	891	891	893	885	401
35°	405	451	494	453	409	255
45°	95	124	170	124	99	81
55°	2	12	23	14	2	9
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°	1498.5	1498.5	1498.5	1498.5	1498.5
2.5°	1486.1	1486.1	1488.2	1488.2	1490.3
5°	1465.5	1467.5	1469.6	1463.4	1463.4
7.5°	1432.4	1430.3	1428.3	1428.3	1428.3
10°	1384.9	1382.8	1380.7	1376.6	1374.5
12.5°	1320.8	1318.7	1314.6	1316.6	1316.6
15°	1248.4	1248.4	1246.4	1246.4	1244.3
17.5°	1169.9	1167.8	1163.7	1165.8	1165.8
20°	1087.2	1083.1	1076.9	1078.9	1085.1
22.5°	992.1	994.2	985.9	990.1	990.1
25°	878.5	890.9	890.9	892.9	884.7
27.5°	775.1	783.4	802.0	781.3	775.1
30°	659.4	675.9	702.8	673.8	655.2
32.5°	531.2	564.3	603.5	566.3	531.2
35°	405.1	450.6	494.0	452.7	409.3
37.5°	291.4	343.1	405.1	347.2	295.6
40°	208.8	254.2	324.5	254.2	204.6
42.5°	142.6	177.8	241.8	179.8	142.6
45°	95.1	124.0	169.5	124.0	99.2
47.5°	64.1	84.7	109.5	84.7	64.1
50°	39.3	55.8	68.2	55.8	39.3
52.5°	18.6	31.0	39.3	31.0	18.6
55°	2.1	12.4	22.7	14.5	2.1
57.5°	2.1	2.1	12.4	2.1	2.1
60°	0.0	2.1	4.1	2.1	2.1
62.5°	0.0	0.0	0.0	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)