

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: P241865

Luminaire Tested: **PRS420D010-S4M12-41SNDMW**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241865  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-52)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-41SNDMW  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM MATTE WHITE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

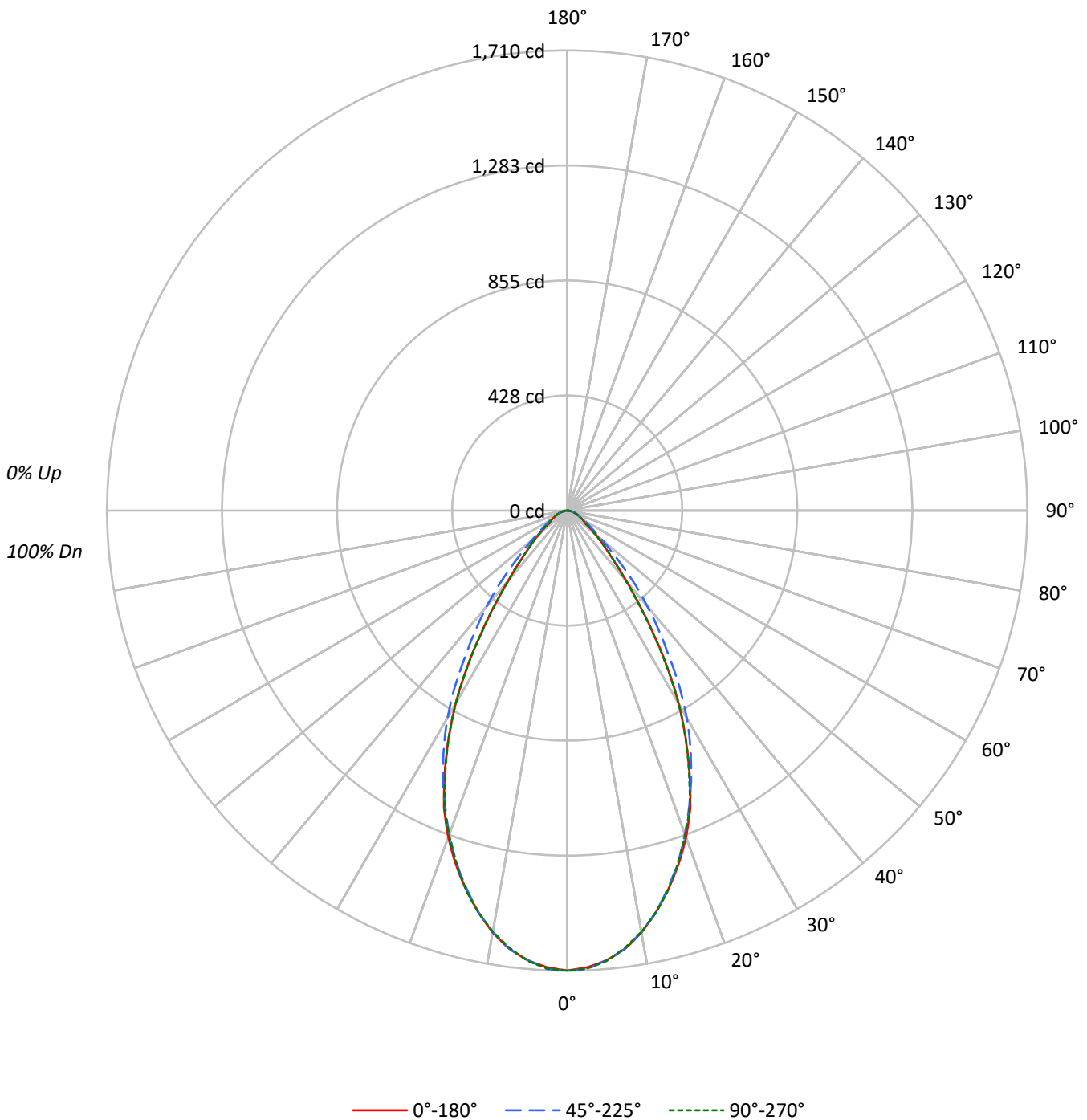
Lumens per Lamp: N/A  
Luminaire Lumens: 1807.7 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.93  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

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	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91					91			
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83					83			
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77	75					75			
4	94	85	79	74	92	84	78	73	81	76	72	79	75	71	77	74	71	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	66	72	68	65	63					63			
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	79	68	61	57	77	67	61	57	66	60	56	65	60	56	64	59	56	54					54			
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	49	58	53	49	57	52	48	56	52	48	47					47			
10	67	56	50	46	66	56	50	46	55	49	45	54	49	45	53	49	45	44					44			

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

	0°	45°	90°
0°	130866	130866	130866
5°	128900	128900	129069
10°	123729	123566	123566
15°	115284	114943	115450
20°	105241	104190	104540
25°	90841	92108	90478
30°	73289	78592	73289
35°	52253	61466	51851
40°	34043	46453	33613
45°	22732	31306	22960
50°	16326	19898	16076
55°	10863	14012	10863
60°	9843	10502	9843
65°	8929	8929	8929
70°	8146	8146	8146
75°	6979	6979	6979
80°	6612	6612	6612
85°	5621	5621	5621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.5	8.7
10°-20°	406.0	22.5
20°-30°	493.6	27.3
30°-40°	382.0	21.1
40°-50°	196.7	10.9
50°-60°	89.1	4.9
60°-70°	49.4	2.7
70°-80°	26.0	1.4
80°-90°	7.5	0.4
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°	1057.0	58.5
0°-40°	1439.0	79.6
0°-60°	1724.9	95.4
0°-90°	1807.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1807.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1710	1710	1710	1710	1710	
5°	1678	1682	1678	1680	1680	157
15°	1455	1455	1450	1453	1457	407
25°	1076	1088	1091	1086	1071	489
35°	559	615	658	613	555	352
45°	210	242	289	242	212	169
55°	81	94	105	94	81	81
65°	49	49	49	49	49	48
75°	24	24	24	24	24	26
85°	6	6	6	6	6	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1709.7	1709.7	1709.7	1709.7	1709.7
2.5°	1699.0	1701.2	1705.5	1703.3	1703.3
5°	1677.6	1681.9	1677.6	1679.8	1679.8
7.5°	1643.3	1643.3	1643.3	1639.0	1639.0
10°	1591.9	1589.8	1589.8	1589.8	1589.8
12.5°	1527.6	1529.8	1527.6	1529.8	1527.6
15°	1454.8	1454.8	1450.5	1452.6	1456.9
17.5°	1377.7	1375.5	1371.2	1369.1	1371.2
20°	1292.0	1285.5	1279.1	1283.4	1283.4
22.5°	1195.5	1193.4	1187.0	1189.1	1191.3
25°	1075.6	1088.4	1090.6	1086.3	1071.3
27.5°	953.4	968.4	992.0	968.4	953.4
30°	829.2	852.7	889.2	852.7	829.2
32.5°	694.2	737.0	777.7	739.2	692.0
35°	559.2	614.9	657.8	612.8	554.9
37.5°	439.2	492.8	557.1	494.9	437.1
40°	340.7	389.9	464.9	389.9	336.4
42.5°	265.7	308.5	374.9	306.4	265.7
45°	210.0	242.1	289.2	242.1	212.1
47.5°	171.4	195.0	218.5	195.0	171.4
50°	137.1	154.3	167.1	154.3	135.0
52.5°	107.1	122.1	130.7	122.1	107.1
55°	81.4	94.3	105.0	94.3	81.4
57.5°	72.8	75.0	85.7	75.0	72.8
60°	64.3	64.3	68.6	64.3	64.3
62.5°	55.7	57.8	57.8	57.8	55.7
65°	49.3	49.3	49.3	49.3	49.3
67.5°	40.7	42.9	42.9	42.9	40.7
70°	36.4	36.4	36.4	36.4	36.4
72.5°	30.0	30.0	30.0	30.0	30.0
75°	23.6	23.6	23.6	23.6	23.6
77.5°	19.3	19.3	19.3	19.3	19.3
80°	15.0	15.0	15.0	15.0	15.0
82.5°	10.7	10.7	10.7	10.7	10.7
85°	6.4	6.4	6.4	6.4	6.4
87.5°	2.1	2.1	2.1	4.3	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)