

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: P241820

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241820  
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  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

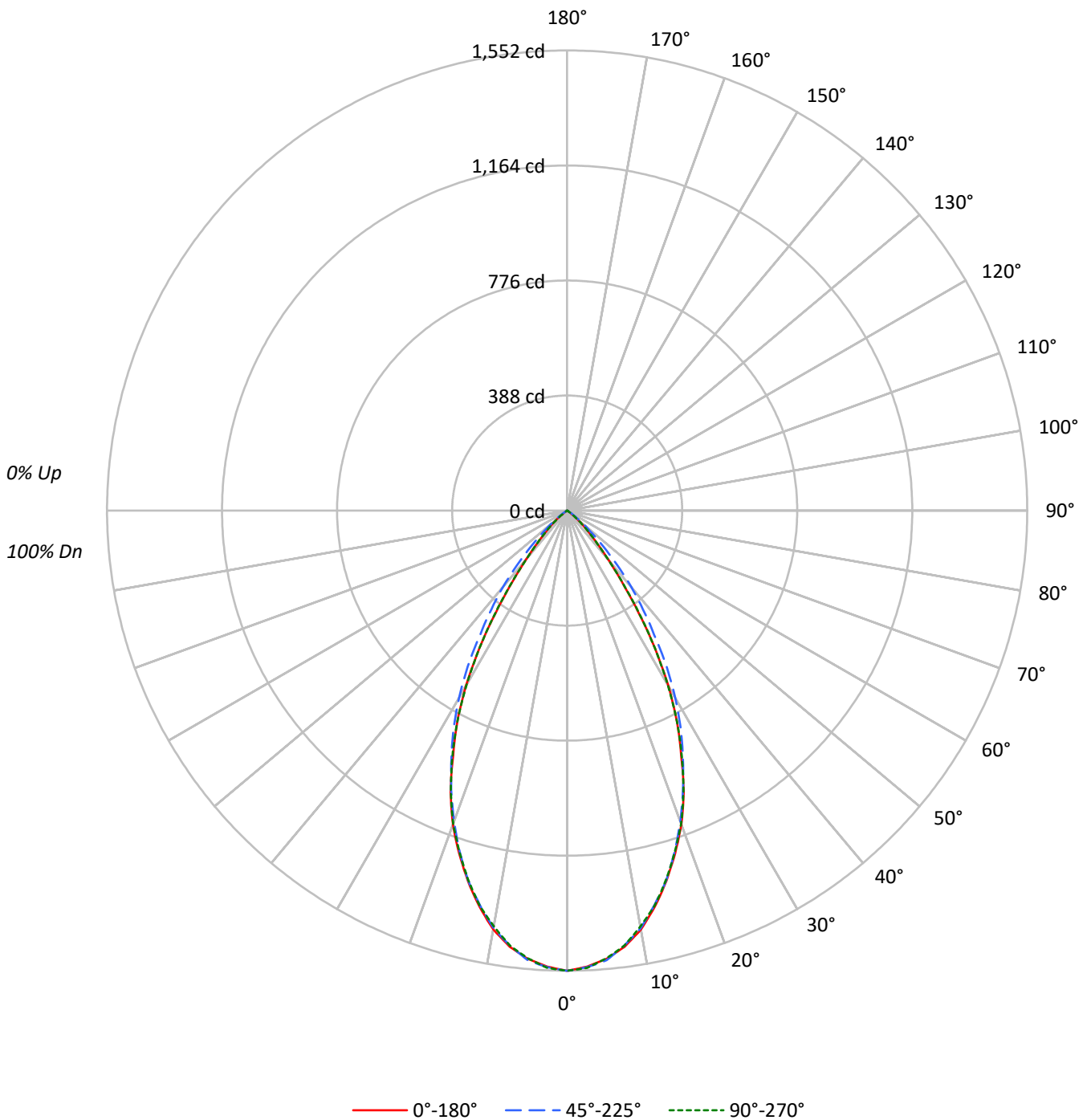
Lumens per Lamp: N/A  
Luminaire Lumens: 1340.8 lumens  
Efficiency: N/A  
Efficacy: 67.0 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.89  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

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°	118811	118811	118811
5°	116637	116967	116468
10°	111495	111161	110664
15°	102478	102303	102137
20°	91736	90864	91556
25°	76847	77936	77396
30°	60367	64344	59987
35°	39208	47814	39610
40°	21603	33583	21183
45°	10662	19008	11128
50°	4847	8419	4847
55°	280	3149	280
60°	0	658	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°	142.1	10.6
10°-20°	359.7	26.8
20°-30°	419.1	31.3
30°-40°	292.8	21.8
40°-50°	109.5	8.2
50°-60°	17.2	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°	920.9	68.7
0°-40°	1213.8	90.5
0°-60°	1340.5	100.0
0°-90°	1340.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1340.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1518	1520	1522	1516	1516	142
15°	1293	1293	1291	1291	1289	361
25°	910	923	923	925	916	416
35°	420	467	512	469	424	264
45°	98	128	176	128	103	84
55°	2	13	24	15	2	10
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°	1552.2	1552.2	1552.2	1552.2	1552.2
2.5°	1539.4	1539.4	1541.5	1541.5	1543.7
5°	1518.0	1520.1	1522.3	1515.8	1515.8
7.5°	1483.7	1481.6	1479.5	1479.5	1479.5
10°	1434.5	1432.3	1430.2	1425.9	1423.8
12.5°	1368.1	1366.0	1361.7	1363.8	1363.8
15°	1293.2	1293.2	1291.0	1291.0	1288.9
17.5°	1211.8	1209.7	1205.4	1207.5	1207.5
20°	1126.2	1121.9	1115.5	1117.6	1124.0
22.5°	1027.7	1029.8	1021.3	1025.6	1025.6
25°	909.9	922.8	922.8	924.9	916.4
27.5°	802.9	811.5	830.7	809.3	802.9
30°	683.0	700.1	728.0	698.0	678.7
32.5°	550.2	584.5	625.2	586.6	550.2
35°	419.6	466.7	511.7	468.9	423.9
37.5°	301.9	355.4	419.6	359.7	306.2
40°	216.2	263.3	336.1	263.3	212.0
42.5°	147.7	184.1	250.5	186.3	147.7
45°	98.5	128.5	175.6	128.5	102.8
47.5°	66.4	87.8	113.5	87.8	66.4
50°	40.7	57.8	70.7	57.8	40.7
52.5°	19.3	32.1	40.7	32.1	19.3
55°	2.1	12.8	23.6	15.0	2.1
57.5°	2.1	2.1	12.8	2.1	2.1
60°	0.0	2.1	4.3	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)