

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: P241880

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241880  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-53)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-41SMDMW  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM 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: 1957.7 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.02  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

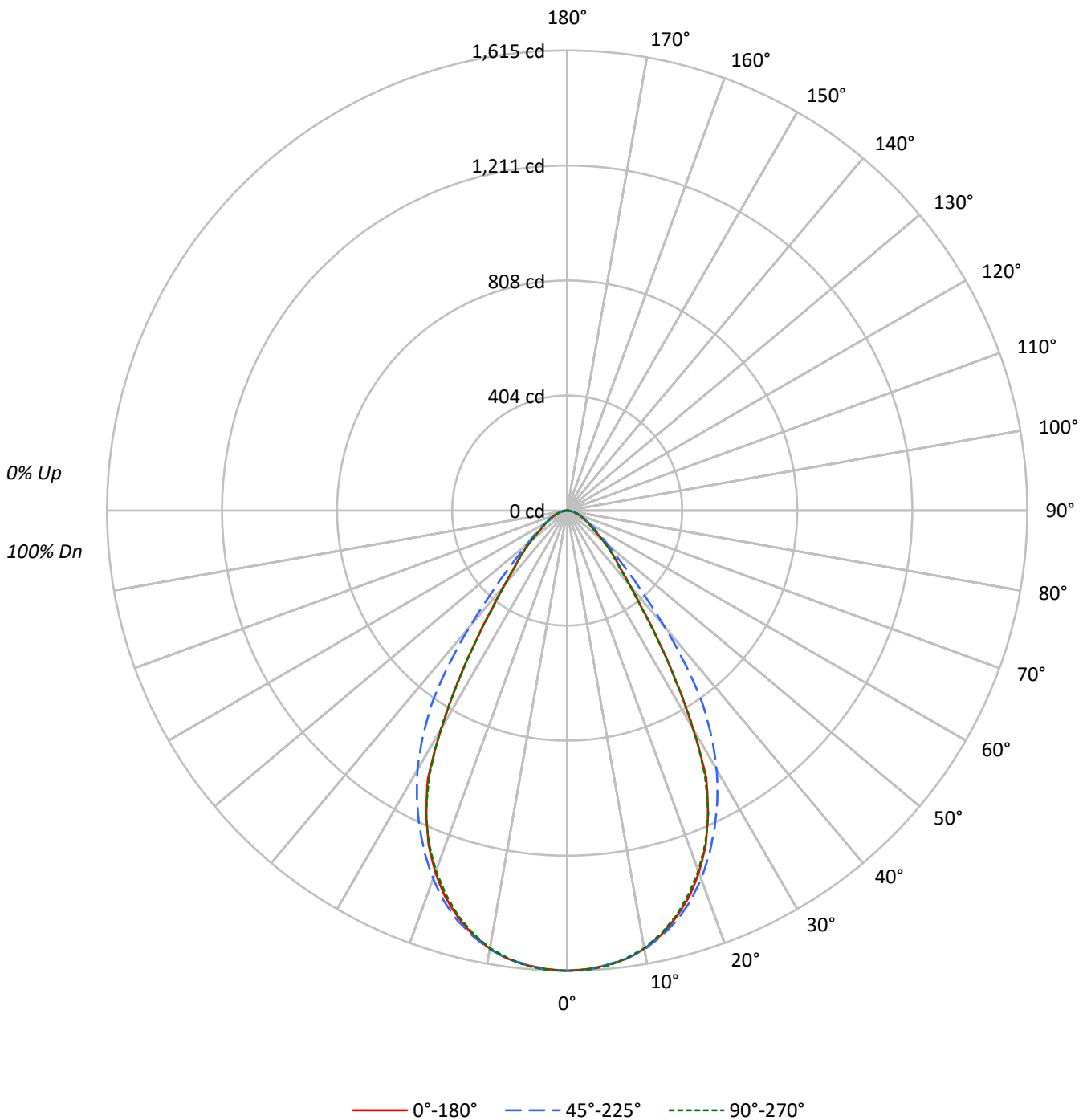
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	102	103	100	98	99	97	95	95	94	93	91				91
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84	82				82
3	99	91	85	81	97	90	84	80	87	82	79	85	81	77	82	79	76	74				74
4	93	84	78	73	91	83	77	72	81	75	71	78	74	70	77	73	70	68				68
5	87	78	71	66	86	77	70	66	75	69	65	73	68	64	71	67	64	62				62
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57				57
7	78	67	60	55	76	66	60	55	65	59	55	64	58	55	62	58	54	53				53
8	73	63	56	51	72	62	55	51	61	55	51	60	54	51	59	54	50	49				49
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47	45				45
10	66	55	48	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42				42

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

	0°	45°	90°
0°	123625	123625	123625
5°	123114	122945	123275
10°	121374	121537	121203
15°	117122	117970	116781
20°	110096	112018	109574
25°	98780	103484	98957
30°	77999	92769	78574
35°	52038	77464	52038
40°	34243	53078	33813
45°	25742	32226	25503
50°	19898	21935	19636
55°	14573	16868	14573
60°	12783	13441	12783
65°	11247	11646	11247
70°	9579	10071	10071
75°	8872	8872	8872
80°	7538	7538	7538
85°	5621	7553	5621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.7	7.7
10°-20°	415.0	21.2
20°-30°	545.0	27.8
30°-40°	420.3	21.5
40°-50°	211.3	10.8
50°-60°	111.0	5.7
60°-70°	62.7	3.2
70°-80°	31.9	1.6
80°-90°	8.7	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°	1111.7	56.8
0°-40°	1532.1	78.3
0°-60°	1854.3	94.7
0°-90°	1957.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1957.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1602	1604	1600	1604	1604	152
15°	1478	1482	1489	1480	1474	414
25°	1170	1204	1225	1202	1172	528
35°	557	651	829	653	557	357
45°	238	261	298	259	236	187
55°	109	120	126	120	109	103
65°	62	62	64	62	62	62
75°	30	30	30	30	30	32
85°	6	6	9	6	6	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1615.1	1615.1	1615.1	1615.1	1615.1
2.5°	1610.8	1613.0	1615.1	1613.0	1613.0
5°	1602.3	1604.4	1600.1	1604.4	1604.4
7.5°	1587.3	1585.1	1587.3	1585.1	1585.1
10°	1561.6	1561.6	1563.7	1559.4	1559.4
12.5°	1525.2	1527.3	1529.4	1527.3	1520.9
15°	1478.0	1482.3	1488.7	1480.2	1473.7
17.5°	1422.3	1426.6	1437.3	1424.5	1413.8
20°	1351.6	1362.4	1375.2	1362.4	1345.2
22.5°	1270.2	1291.7	1304.5	1287.4	1266.0
25°	1169.6	1203.8	1225.3	1201.7	1171.7
27.5°	1058.2	1101.0	1141.7	1105.3	1047.5
30°	882.5	972.5	1049.6	976.8	889.0
32.5°	713.3	811.8	944.7	811.8	713.3
35°	556.9	651.2	829.0	653.3	556.9
37.5°	430.6	512.0	683.3	512.0	426.3
40°	342.7	396.3	531.2	394.1	338.4
42.5°	278.5	317.0	394.1	314.9	274.2
45°	237.8	261.3	297.7	259.2	235.6
47.5°	201.4	220.6	227.1	218.5	199.2
50°	167.1	186.4	184.2	184.2	164.9
52.5°	135.0	149.9	152.1	149.9	135.0
55°	109.2	120.0	126.4	120.0	109.2
57.5°	94.3	98.5	107.1	98.5	96.4
60°	83.5	85.7	87.8	85.7	83.5
62.5°	72.8	72.8	72.8	72.8	72.8
65°	62.1	62.1	64.3	62.1	62.1
67.5°	51.4	53.6	53.6	53.6	51.4
70°	42.8	45.0	45.0	45.0	45.0
72.5°	36.4	36.4	36.4	36.4	36.4
75°	30.0	30.0	30.0	30.0	30.0
77.5°	23.6	23.6	23.6	23.6	23.6
80°	17.1	17.1	17.1	17.1	17.1
82.5°	10.7	12.9	12.9	12.9	10.7
85°	6.4	6.4	8.6	6.4	6.4
87.5°	4.3	4.3	4.3	4.3	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)