

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: P241910

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241910  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-55)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-41SNDH  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM HAZE  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

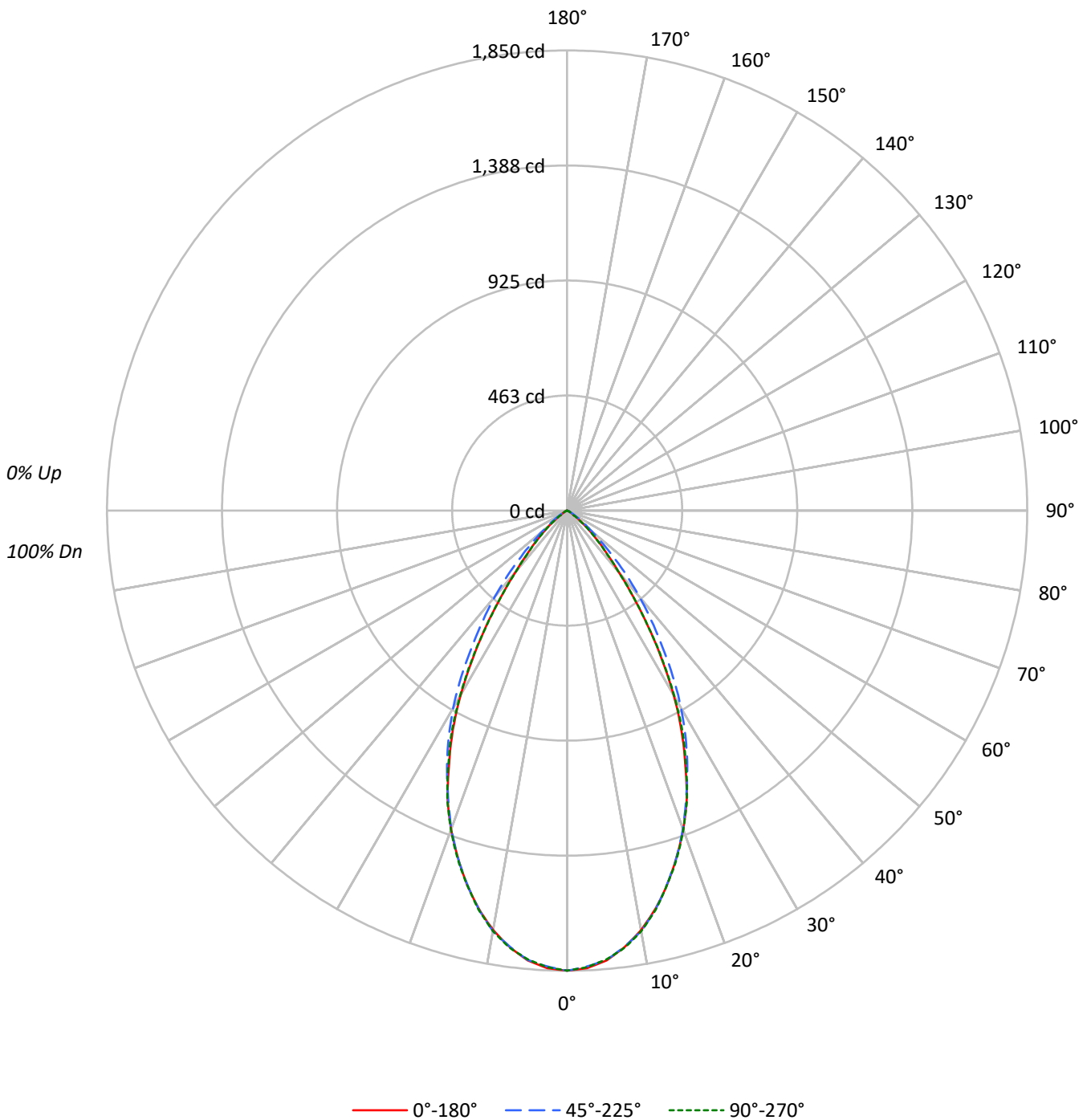
Lumens per Lamp: N/A  
Luminaire Lumens: 1743.5 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.91  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

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	100	100	
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93	
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86	86	86	86	
3	101	95	89	85	99	93	88	84	91	86	83	88	85	82	86	83	81	79	79	79	79	
4	96	88	82	78	94	87	81	77	85	80	76	83	79	75	81	77	74	73	73	73	73	
5	91	82	76	71	89	81	75	71	79	74	70	77	73	70	76	72	69	67	67	67	67	
6	86	76	70	66	84	76	70	65	74	69	65	73	68	64	71	67	64	63	63	63	63	
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58	58	58	58	
8	77	67	61	57	76	67	61	56	65	60	56	64	59	56	63	59	56	54	54	54	54	
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51	51	51	51	
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	48	48	48	48	

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

	0°	45°	90°
0°	141575	141575	141575
5°	139488	139326	139157
10°	133110	133445	133445
15°	123335	123160	123335
20°	111081	110902	111252
25°	94920	96550	95461
30°	75684	80987	76249
35°	53010	62214	52814
40°	32304	45134	32084
45°	19463	28275	18998
50°	10967	15290	10705
55°	4003	7994	4003
60°	2618	3934	2618
65°	1558	2318	1558
70°	962	1432	962
75°	621	1272	621
80°	926	926	926
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.9	9.7
10°-20°	434.3	24.9
20°-30°	517.9	29.7
30°-40°	385.9	22.1
40°-50°	172.8	9.9
50°-60°	47.0	2.7
60°-70°	11.4	0.7
70°-80°	3.7	0.2
80°-90°	0.6	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°	1122.0	64.4
0°-40°	1507.9	86.5
0°-60°	1727.8	99.1
0°-90°	1743.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1743.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1815	1809	1813	1811	1811	170
15°	1556	1554	1554	1558	1556	434
25°	1124	1141	1143	1143	1130	512
35°	567	619	666	619	565	355
45°	180	210	261	210	176	144
55°	30	47	60	47	30	36
65°	9	11	13	11	9	9
75°	2	4	4	4	2	3
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°	1849.6	1849.6	1849.6	1849.6	1849.6
2.5°	1841.1	1836.8	1834.7	1834.7	1836.8
5°	1815.4	1809.0	1813.3	1811.1	1811.1
7.5°	1770.4	1770.4	1768.3	1772.6	1772.6
10°	1712.6	1714.8	1716.9	1714.8	1716.9
12.5°	1639.8	1637.7	1642.0	1644.1	1644.1
15°	1556.4	1554.2	1554.2	1558.5	1556.4
17.5°	1462.2	1464.3	1462.2	1464.3	1466.4
20°	1363.7	1363.7	1361.5	1363.7	1365.8
22.5°	1256.6	1256.6	1250.2	1254.5	1258.8
25°	1123.9	1141.0	1143.2	1143.2	1130.3
27.5°	995.5	1008.3	1031.9	1012.6	1006.2
30°	856.3	882.0	916.3	886.3	862.7
32.5°	708.6	755.7	792.1	751.4	715.0
35°	567.3	618.7	665.8	618.7	565.2
37.5°	434.6	490.2	554.5	492.4	434.6
40°	323.3	376.8	451.7	374.6	321.1
42.5°	239.8	284.7	353.2	282.6	239.8
45°	179.8	209.8	261.2	209.8	175.5
47.5°	130.6	156.3	186.2	154.1	130.6
50°	92.1	111.3	128.4	111.3	89.9
52.5°	57.8	74.9	87.8	74.9	57.8
55°	30.0	47.1	59.9	47.1	30.0
57.5°	21.4	25.7	38.5	25.7	21.4
60°	17.1	19.3	25.7	19.3	17.1
62.5°	12.8	15.0	15.0	15.0	12.8
65°	8.6	10.7	12.8	10.7	8.6
67.5°	6.4	8.6	8.6	8.6	6.4
70°	4.3	6.4	6.4	6.4	4.3
72.5°	4.3	4.3	4.3	4.3	4.3
75°	2.1	4.3	4.3	4.3	2.1
77.5°	2.1	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	2.1	2.1
82.5°	0.0	2.1	2.1	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)