

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: P241655

Luminaire Tested: **PRS420D010-S4M12-44SMDMB**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241655  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-38)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-44SMDMB  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SHALLOW TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

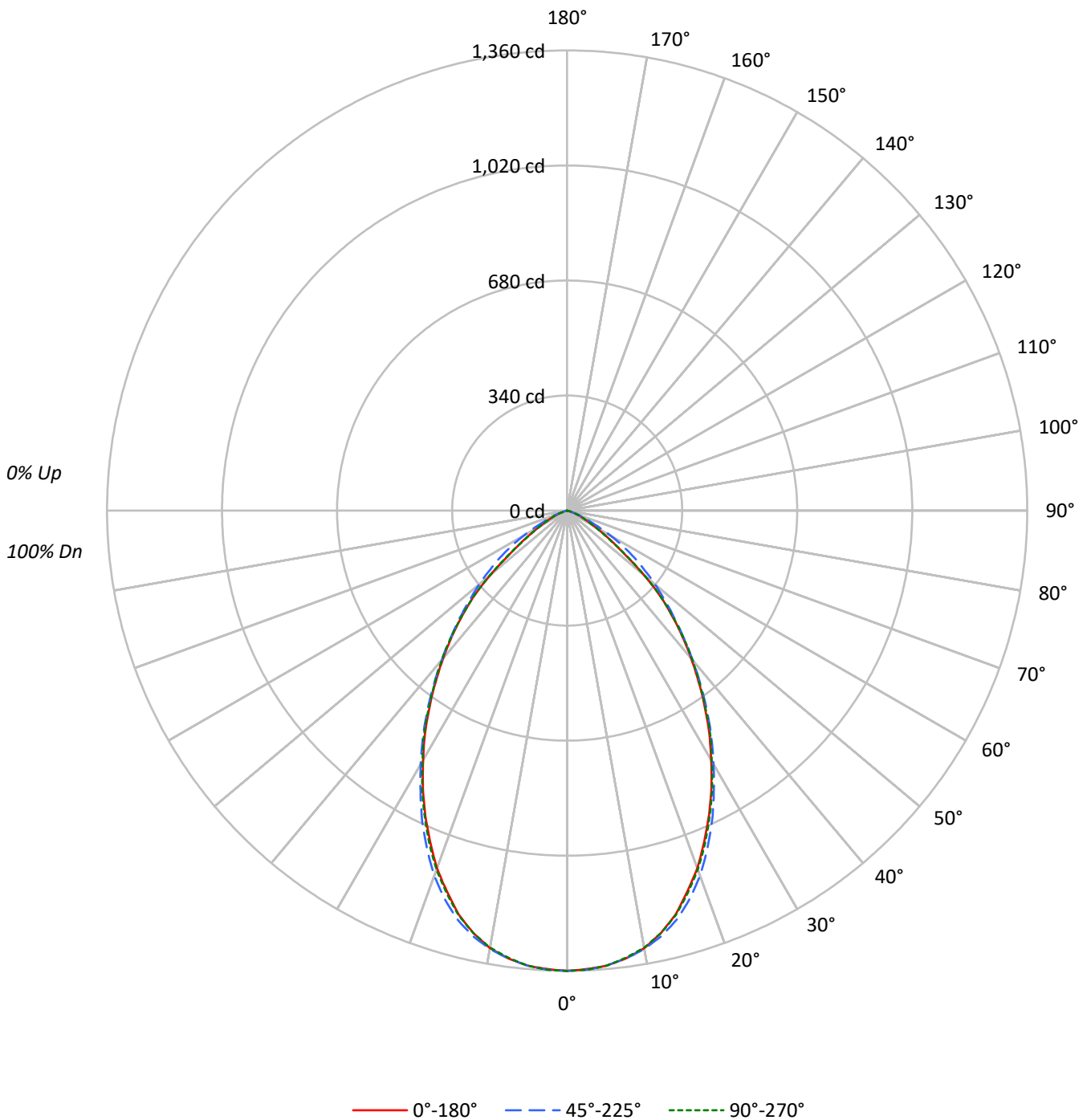
Lumens per Lamp: N/A  
Luminaire Lumens: 1983.4 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P241655  
CATALOG NUMBER: PRS420D010-S4M12-44SMDMB

### Luminous Intensity Polar Plot





TEST NUMBER: P241655

CATALOG NUMBER: PRS420D010-S4M12-44SMDMB

**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	103	110	107	104	101	103	100	98	99	97	95	95	94	93	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	91	82	75	70	89	81	74	70	78	73	69	76	72	68	74	70	67	65					65			
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59					59			
6	80	69	62	56	78	68	61	56	66	60	56	65	60	55	64	59	55	53					53			
7	75	64	56	51	73	63	56	51	62	55	51	60	55	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	42	41					41			
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38					38			

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

	0°	45°	90°
0°	104137	104137	104137
5°	103713	103713	103713
10°	102083	102254	101920
15°	97969	99157	98135
20°	91630	93544	91972
25°	83781	85588	84144
30°	75180	76506	75560
35°	66269	67269	66671
40°	56945	57594	57594
45°	47316	48474	47543
50°	35212	40309	35462
55°	22299	32308	22019
60°	14099	22626	13778
65°	9309	12805	9309
70°	5282	6714	5282
75°	0	1893	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P241655

CATALOG NUMBER: PRS420D010-S4M12-44SMDMB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.7	6.4
10°-20°	348.0	17.5
20°-30°	460.6	23.2
30°-40°	448.6	22.6
40°-50°	343.5	17.3
50°-60°	183.2	9.2
60°-70°	63.7	3.2
70°-80°	8.2	0.4
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°	936.2	47.2
0°-40°	1384.8	69.8
0°-60°	1911.5	96.4
0°-90°	1983.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1983.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1360	1360	1360	1360	1360	
5°	1350	1350	1350	1350	1350	128
15°	1236	1245	1251	1245	1238	346
25°	992	1007	1013	1007	996	455
35°	709	720	720	724	714	443
45°	437	446	448	450	439	335
55°	167	193	242	195	165	157
65°	51	62	71	60	51	53
75°	0	2	6	2	0	6
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P241655

CATALOG NUMBER: PRS420D010-S4M12-44SMDMB

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	<i>1360.5</i>	<i>1360.5</i>	<i>1360.5</i>	<i>1360.5</i>	<i>1360.5</i>
2.5°	<i>1356.3</i>	1356.3	1358.4	1356.3	1358.4
5°	<i>1349.8</i>	1349.8	1349.8	1349.8	1349.8
7.5°	<i>1334.8</i>	1334.8	1334.8	1334.8	1332.7
10°	<i>1313.4</i>	1313.4	1315.6	1313.4	1311.3
12.5°	<i>1279.1</i>	1283.4	1287.7	1285.6	1279.1
15°	<i>1236.3</i>	1244.8	1251.3	1244.8	1238.4
17.5°	<i>1180.6</i>	1191.3	1204.1	1193.4	1184.9
20°	<i>1124.9</i>	1133.4	1148.4	1137.7	1129.1
22.5°	<i>1058.4</i>	1071.3	1082.0	1075.6	1064.9
25°	<i>992.0</i>	1007.0	1013.4	1007.0	996.3
27.5°	<i>923.5</i>	934.2	938.5	940.6	927.7
30°	<i>850.6</i>	863.5	865.6	867.8	854.9
32.5°	<i>782.0</i>	792.8	792.8	799.2	788.5
35°	<i>709.2</i>	719.9	719.9	724.2	713.5
37.5°	<i>638.5</i>	649.2	647.1	653.5	642.8
40°	<i>569.9</i>	578.5	576.4	580.6	576.4
42.5°	<i>503.5</i>	512.1	509.9	514.2	507.8
45°	<i>437.1</i>	445.7	447.8	449.9	439.2
47.5°	<i>372.8</i>	383.5	390.0	387.8	372.8
50°	<i>295.7</i>	321.4	338.5	325.7	297.8
52.5°	<i>220.7</i>	257.1	287.1	259.3	225.0
55°	<i>167.1</i>	192.8	242.1	195.0	165.0
57.5°	<i>124.3</i>	145.7	195.0	143.6	122.1
60°	<i>92.1</i>	109.3	147.8	107.1	90.0
62.5°	<i>68.6</i>	81.4	102.8	79.3	68.6
65°	<i>51.4</i>	62.1	70.7	60.0	51.4
67.5°	<i>38.6</i>	45.0	47.1	45.0	36.4
70°	<i>23.6</i>	30.0	30.0	30.0	23.6
72.5°	<i>10.7</i>	15.0	17.1	15.0	10.7
75°	<i>0.0</i>	2.1	6.4	2.1	0.0
77.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
80°	<i>0.0</i>	0.0	0.0	0.0	0.0
82.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
85°	<i>0.0</i>	0.0	0.0	0.0	0.0
87.5°	<i>0.0</i>	0.0	0.0	0.0	0.0
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)