

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: P241830

Luminaire Tested: **PRS420D010-S4M12-41SMDMB-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241830  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-50)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS420D010-S4M12-41SMDMB-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1379.2 lumens  
Efficiency: N/A  
Efficacy: 69.0 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.98  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

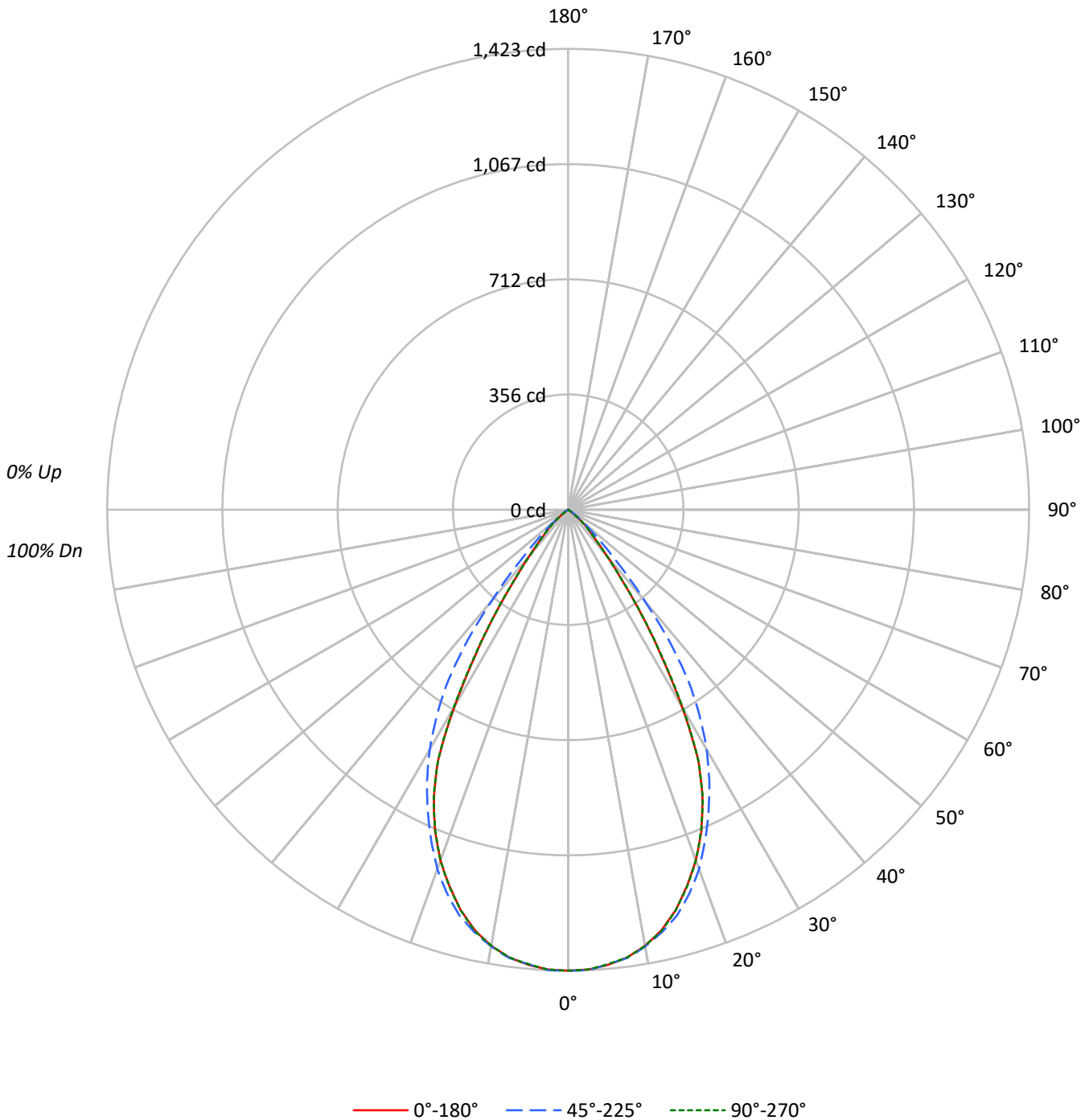
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	111	108	106	111	109	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	84	82	80
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69
6	87	78	72	68	86	77	72	67	76	71	67	74	70	66	73	69	66	65
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60
8	78	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56
9	75	65	59	55	74	64	59	55	63	58	54	62	58	54	62	57	54	53
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	49

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

	0°	45°	90°
0°	108937	108937	108937
5°	108392	108239	108239
10°	106272	106436	106272
15°	101463	102779	101463
20°	93853	96207	93853
25°	82809	86652	82987
30°	62161	75507	62709
35°	36536	60691	36723
40°	18185	36791	17986
45°	10078	16573	10078
50°	4930	6895	4930
55°	280	3043	280
60°	321	628	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°	133.3	9.7
10°-20°	359.8	26.1
20°-30°	455.9	33.1
30°-40°	312.6	22.7
40°-50°	100.8	7.3
50°-60°	16.4	1.2
60°-70°	0.4	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°	948.9	68.8
0°-40°	1261.5	91.5
0°-60°	1378.8	100.0
0°-90°	1379.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1379.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1411	1413	1409	1413	1409	133
15°	1280	1289	1297	1289	1280	357
25°	980	1009	1026	1007	983	440
35°	391	482	650	486	393	250
45°	93	116	153	114	93	76
55°	2	12	23	12	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°	1423.2	1423.2	1423.2	1423.2	1423.2
2.5°	1421.1	1421.1	1423.2	1421.1	1421.1
5°	1410.7	1412.8	1408.7	1412.8	1408.7
7.5°	1394.2	1392.1	1396.3	1392.1	1394.2
10°	1367.3	1365.2	1369.4	1365.2	1367.3
12.5°	1330.1	1332.1	1336.3	1334.2	1332.1
15°	1280.4	1288.7	1297.0	1288.7	1280.4
17.5°	1218.4	1228.7	1243.2	1228.7	1220.4
20°	1152.2	1162.5	1181.1	1164.6	1152.2
22.5°	1073.6	1094.3	1104.6	1092.2	1071.5
25°	980.5	1009.4	1026.0	1007.4	982.6
27.5°	868.8	914.3	943.3	914.3	868.8
30°	703.3	792.3	854.3	792.3	709.5
32.5°	533.7	637.1	755.0	633.0	539.9
35°	391.0	482.0	649.5	486.1	393.0
37.5°	266.8	347.5	513.0	343.4	268.9
40°	182.0	240.0	368.2	237.9	180.0
42.5°	128.2	163.4	244.1	163.4	126.2
45°	93.1	115.8	153.1	113.8	93.1
47.5°	68.3	84.8	95.2	82.7	66.2
50°	41.4	57.9	57.9	57.9	41.4
52.5°	18.6	33.1	35.2	33.1	18.6
55°	2.1	12.4	22.8	12.4	2.1
57.5°	2.1	2.1	12.4	2.1	2.1
60°	2.1	2.1	4.1	2.1	2.1
62.5°	0.0	0.0	2.1	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)