

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: P210414

Luminaire Tested: **PR8R20D010 - PR8M12WW - 3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P210414  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29047)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PR8R20D010 - PR8M12WW - 3000K  
Description: HALO 8" ROUND DOWNLIGHT, WALLWASH, MATTE WHITE FINISH  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1847.3 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 1.19 / 1.17  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

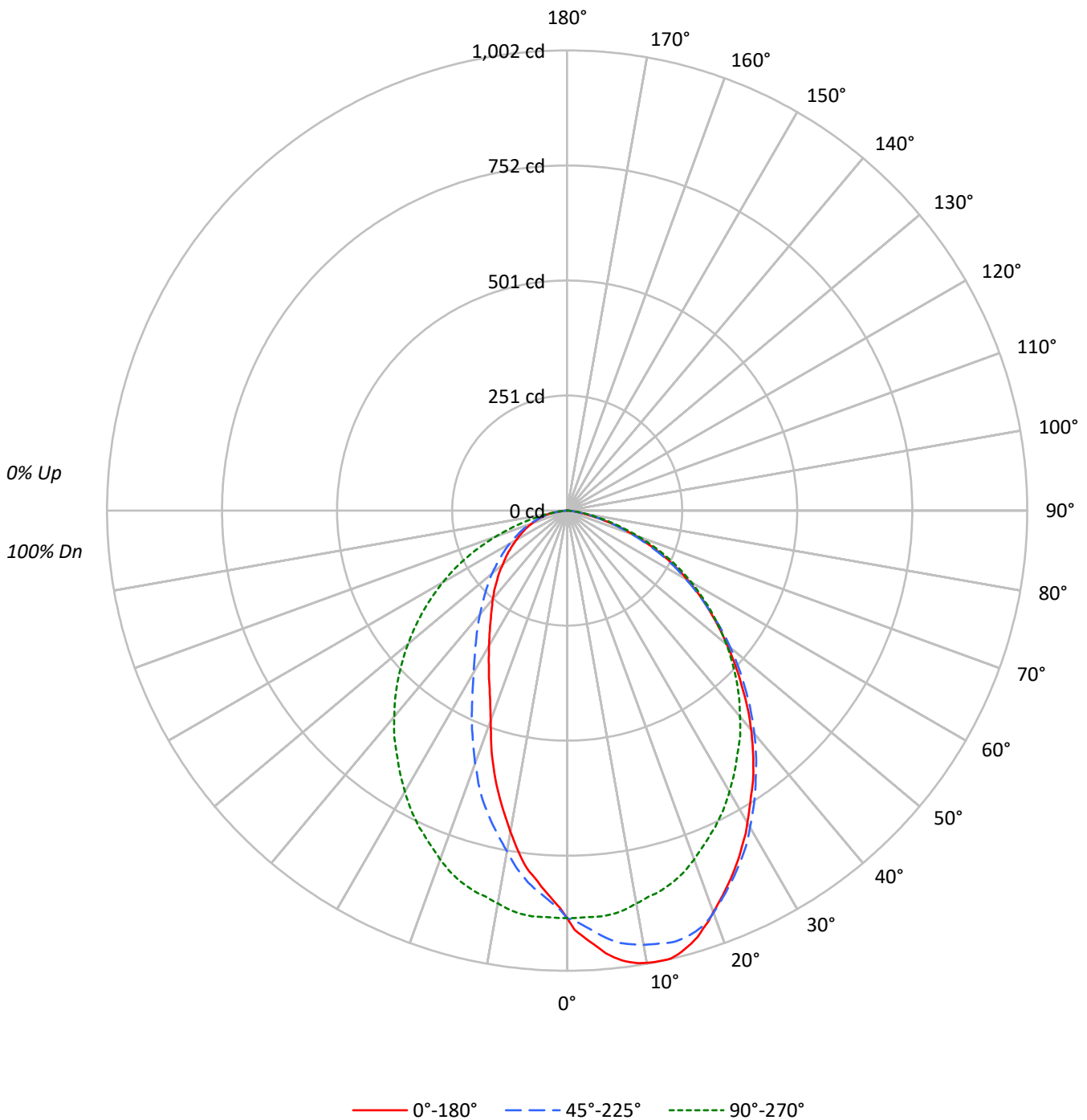
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P210414

CATALOG NUMBER: PR8R20D010 - PR8M12WW - 3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P210414

CATALOG NUMBER: PR8R20D010 - PR8M12WW - 3000K

**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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	50					48				
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45					43				
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40					38				
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37					35				
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33					32				
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	30					29				

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

	0°	90°	180°
0°	27364	27364	27364
5°	29945	27441	24856
10°	31303	27198	22247
15°	31570	27011	19298
20°	30535	26528	15974
25°	29339	25916	13691
30°	27951	25170	12121
35°	26611	24344	10921
40°	25090	23573	10124
45°	23422	22720	9441
50°	21804	21717	8789
55°	20279	20569	8306
60°	18724	19279	7863
65°	16709	17563	7603
70°	13930	14903	7285
75°	9948	11450	7065
80°	5896	7494	6695
85°	3184	2866	3184



TEST NUMBER: P210414

CATALOG NUMBER: PR8R20D010 - PR8M12WW - 3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.5	4.5
10°-20°	230.0	12.5
20°-30°	317.4	17.2
30°-40°	346.7	18.8
40°-50°	326.0	17.6
50°-60°	266.0	14.4
60°-70°	180.7	9.8
70°-80°	83.2	4.5
80°-90°	13.7	0.7
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°	631.0	34.2
0°-40°	977.7	52.9
0°-60°	1569.7	85.0
0°-90°	1847.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1847.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	887	887	887	887	887	
5°	967	932	886	825	803	93
15°	989	966	846	676	604	277
25°	862	869	762	491	402	396
35°	707	716	647	346	290	441
45°	537	549	521	252	216	415
55°	377	378	383	177	154	338
65°	229	224	241	115	104	226
75°	84	86	96	61	59	91
85°	9	8	8	9	9	13
90°	0	0	0	0	0	



TEST NUMBER: P210414

CATALOG NUMBER: PR8R20D010 - PR8M12WW - 3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4
1°	912.6	902.7	892.8	890.1	887.4	873.9	869.4	870.3	865.9
2°	926.0	915.3	901.8	894.6	886.5	867.7	857.8	856.0	849.7
3°	939.5	928.7	911.7	899.1	886.5	861.4	846.1	840.7	834.4
4°	953.0	943.1	921.5	905.4	886.5	856.0	835.3	826.3	819.2
5°	967.4	954.8	932.3	910.8	886.5	850.6	825.4	811.1	803.0
6°	978.1	966.5	941.3	915.3	884.7	843.4	813.8	795.8	790.4
7°	987.1	975.4	948.5	918.0	882.9	836.2	800.3	779.6	773.3
8°	993.4	982.6	953.0	918.8	879.3	826.3	786.8	760.8	752.7
9°	997.9	987.1	956.6	919.7	873.9	815.6	770.6	741.9	732.0
10°	999.7	990.7	960.2	919.7	868.6	805.7	753.6	721.2	710.5
11°	1001.5	993.4	962.0	919.7	864.1	795.8	738.3	701.5	688.9
12°	1001.5	993.4	963.8	919.7	858.7	785.0	723.0	681.7	667.4
13°	1001.5	994.3	966.5	920.6	856.0	776.9	707.8	662.9	646.7
14°	996.1	993.4	967.4	920.6	851.5	766.2	692.5	642.2	626.0
15°	988.9	988.0	965.6	919.7	846.1	755.4	676.3	621.5	604.5
16°	980.8	979.0	962.9	918.8	840.7	744.6	661.1	600.9	581.1
17°	970.9	970.0	958.4	915.3	833.5	732.9	643.1	578.4	558.7
18°	957.5	959.3	952.1	910.8	826.3	721.2	625.1	556.0	535.3
19°	945.8	946.7	943.1	903.6	817.4	706.0	603.6	533.5	510.2
20°	930.5	933.2	932.3	898.2	808.4	691.6	585.6	510.2	486.8
21°	917.1	919.7	919.7	891.0	798.5	678.1	565.9	487.7	466.2
22°	903.6	906.3	907.2	883.8	788.6	664.7	547.0	468.0	447.3
23°	890.1	892.8	894.6	876.6	779.6	651.2	528.1	449.1	431.1
24°	876.6	879.3	882.0	867.7	769.8	636.8	510.2	432.9	415.9
25°	862.3	865.9	869.4	860.5	761.7	624.2	491.3	417.7	402.4
26°	847.9	851.5	856.0	851.5	750.9	609.0	472.4	403.3	388.9
27°	832.6	837.1	842.5	841.6	741.0	595.5	454.5	389.8	375.4
28°	816.5	821.8	829.0	831.7	730.2	581.1	437.4	376.3	363.8
29°	803.0	805.7	812.9	820.0	718.6	565.9	422.2	363.8	351.2
30°	785.0	789.5	796.7	806.6	706.9	551.5	406.9	352.1	340.4
32.5°	743.7	749.1	757.2	775.1	677.2	514.7	374.5	325.1	313.5
35°	706.9	707.8	715.9	737.4	646.7	477.8	345.8	299.1	290.1
37.5°	664.7	669.2	676.3	703.3	618.9	441.9	319.8	277.5	269.5
40°	623.3	626.9	634.1	660.2	585.6	406.0	295.5	258.7	251.5
42.5°	581.1	584.7	591.9	621.5	554.2	370.1	272.2	240.7	234.4
45°	537.1	540.7	548.8	579.3	521.0	336.8	251.5	222.8	216.5
47.5°	495.8	496.7	506.6	537.1	486.8	308.1	231.7	205.7	200.3
50°	454.5	455.4	464.4	494.9	452.7	279.3	213.8	187.7	183.2
52.5°	415.9	415.9	421.3	451.8	417.7	253.3	194.0	171.6	168.9
55°	377.2	376.3	378.1	408.7	382.6	229.9	176.9	157.2	154.5
57.5°	340.4	337.7	338.6	366.5	347.6	206.6	160.8	143.7	141.0
60°	303.6	301.8	298.2	325.1	312.6	182.3	144.6	130.2	127.5
62.5°	266.8	265.0	262.3	283.8	277.5	161.7	129.3	117.7	115.9
65°	229.0	229.0	223.6	241.6	240.7	141.0	115.0	105.1	104.2



TEST NUMBER: P210414

CATALOG NUMBER: PR8R20D010 - PR8M12WW - 3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	191.3	189.5	185.9	200.3	203.0	121.3	100.6	92.5	92.5
70°	154.5	154.5	149.1	159.0	165.3	102.4	87.1	81.7	80.8
72.5°	118.6	119.5	115.9	123.1	130.2	83.5	73.7	71.0	70.1
75°	83.5	87.1	86.2	91.6	96.1	65.6	61.1	59.3	59.3
77.5°	51.2	56.6	59.3	63.8	66.5	49.4	48.5	48.5	48.5
80°	33.2	34.1	35.9	40.4	42.2	34.1	35.0	36.8	37.7
82.5°	18.9	18.9	19.8	21.6	23.4	20.7	22.5	24.3	24.3
85°	9.0	8.1	8.1	8.1	8.1	9.0	9.0	9.9	9.0
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)