

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: P210298

Luminaire Tested: **PR820D010 - PR8M12WW - 3500K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P210298  
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: PR820D010 - PR8M12WW - 3500K  
Description: HALO 8" ROUND DOWNLIGHT, WALLWASH, MATTE WHITE FINISH  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2100.3 lumens  
Efficiency: N/A  
Efficacy: 95.5 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

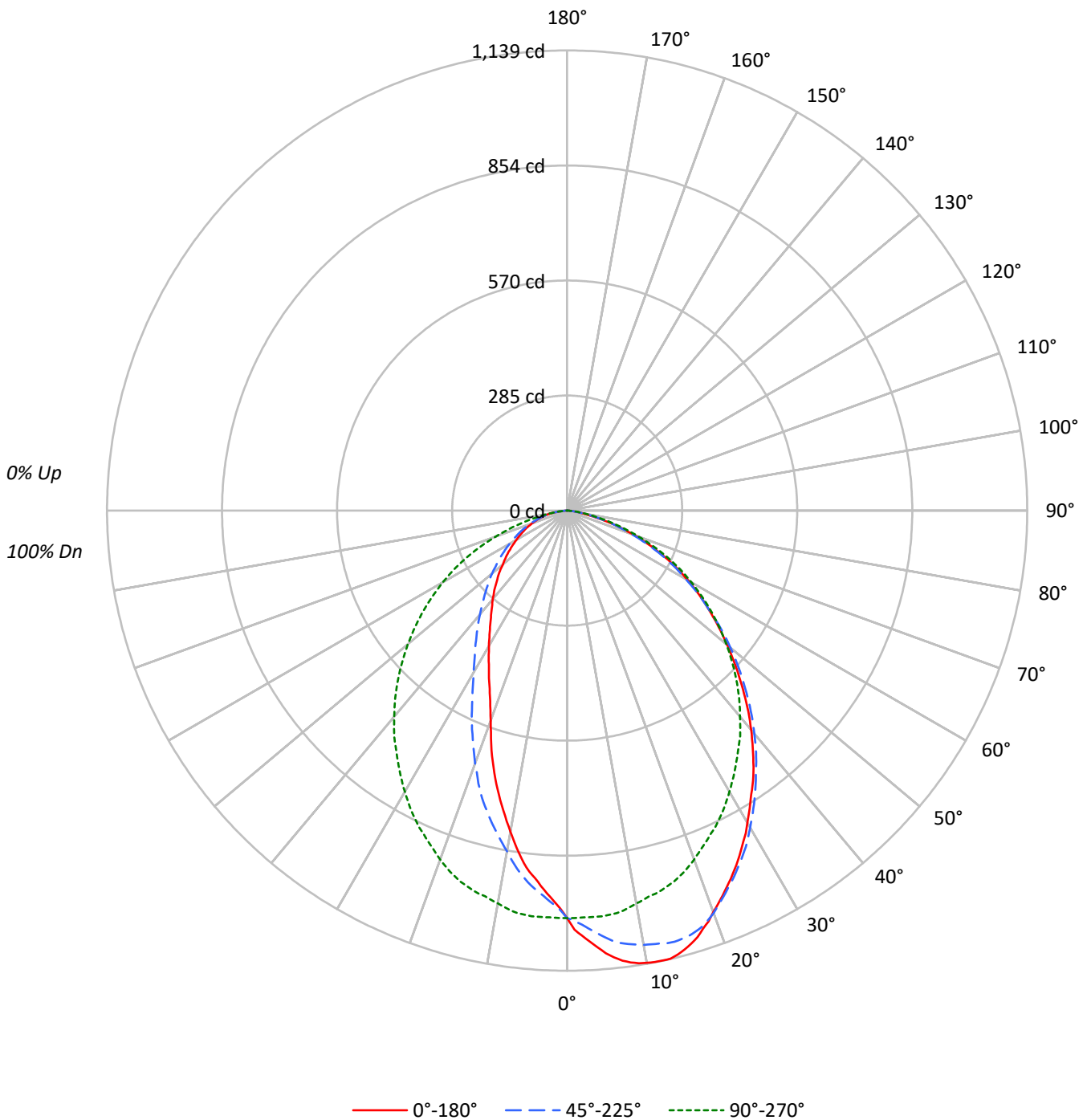
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	31111	31111	31111
5°	34043	31199	28258
10°	35589	30921	25294
15°	35892	30711	21941
20°	34715	30161	18163
25°	33354	29465	15566
30°	31779	28617	13780
35°	30255	27680	12415
40°	28528	26801	11509
45°	26632	25830	10732
50°	24788	24692	9993
55°	23058	23386	9441
60°	21289	21918	8943
65°	19000	19971	8646
70°	15832	16941	8286
75°	11319	13022	8030
80°	6712	8524	7618
85°	3609	3255	3609



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.0	4.5
10°-20°	261.5	12.5
20°-30°	360.9	17.2
30°-40°	394.2	18.8
40°-50°	370.7	17.6
50°-60°	302.4	14.4
60°-70°	205.5	9.8
70°-80°	94.6	4.5
80°-90°	15.6	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°	717.4	34.2
0°-40°	1111.5	52.9
0°-60°	1784.6	85.0
0°-90°	2100.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2100.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1009	1009	1009	1009	1009	
5°	1100	1060	1008	938	913	106
15°	1124	1098	962	769	687	315
25°	980	988	866	559	458	451
35°	804	814	735	393	330	501
45°	611	624	592	286	246	472
55°	429	430	435	201	176	384
65°	260	254	274	131	118	257
75°	95	98	109	69	67	104
85°	10	9	9	10	10	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1008.9	1008.9	1008.9	1008.9	1008.9	1008.9	1008.9	1008.9	1008.9
1°	1037.5	1026.3	1015.1	1012.0	1008.9	993.6	988.5	989.5	984.4
2°	1052.8	1040.6	1025.3	1017.1	1007.9	986.5	975.2	973.2	966.0
3°	1068.2	1055.9	1036.5	1022.2	1007.9	979.3	962.0	955.8	948.7
4°	1083.5	1072.2	1047.7	1029.4	1007.9	973.2	949.7	939.5	931.3
5°	1099.8	1085.5	1060.0	1035.5	1007.9	967.1	938.5	922.1	912.9
6°	1112.1	1098.8	1070.2	1040.6	1005.9	958.9	925.2	904.8	898.6
7°	1122.3	1109.0	1078.4	1043.6	1003.8	950.7	909.9	886.4	879.2
8°	1129.4	1117.2	1083.5	1044.7	999.7	939.5	894.6	864.9	855.8
9°	1134.5	1122.3	1087.6	1045.7	993.6	927.2	876.2	843.5	832.3
10°	1136.6	1126.4	1091.6	1045.7	987.5	916.0	856.8	820.0	807.8
11°	1138.6	1129.4	1093.7	1045.7	982.4	904.8	839.4	797.5	783.2
12°	1138.6	1129.4	1095.7	1045.7	976.2	892.5	822.1	775.1	758.7
13°	1138.6	1130.4	1098.8	1046.7	973.2	883.3	804.7	753.6	735.3
14°	1132.5	1129.4	1099.8	1046.7	968.1	871.1	787.3	730.1	711.8
15°	1124.3	1123.3	1097.8	1045.7	962.0	858.8	768.9	706.7	687.3
16°	1115.1	1113.1	1094.7	1044.7	955.8	846.6	751.6	683.2	660.7
17°	1103.9	1102.9	1089.6	1040.6	947.7	833.3	731.2	657.6	635.2
18°	1088.6	1090.6	1082.5	1035.5	939.5	820.0	710.7	632.1	608.6
19°	1075.3	1076.3	1072.2	1027.3	929.3	802.6	686.2	606.6	580.0
20°	1057.9	1061.0	1060.0	1021.2	919.1	786.3	665.8	580.0	553.5
21°	1042.6	1045.7	1045.7	1013.0	907.8	771.0	643.3	554.5	530.0
22°	1027.3	1030.4	1031.4	1004.8	896.6	755.7	621.9	532.0	508.5
23°	1012.0	1015.1	1017.1	996.7	886.4	740.4	600.5	510.6	490.2
24°	996.7	999.7	1002.8	986.5	875.2	724.0	580.0	492.2	472.8
25°	980.3	984.4	988.5	978.3	866.0	709.7	558.6	474.8	457.5
26°	964.0	968.1	973.2	968.1	853.7	692.4	537.1	458.5	442.2
27°	946.6	951.7	957.9	956.8	842.5	677.0	516.7	443.2	426.9
28°	928.3	934.4	942.6	945.6	830.2	660.7	497.3	427.9	413.6
29°	912.9	916.0	924.2	932.3	816.9	643.3	480.0	413.6	399.3
30°	892.5	897.6	905.8	917.0	803.7	627.0	462.6	400.3	387.0
32.5°	845.5	851.7	860.9	881.3	770.0	585.1	425.8	369.7	356.4
35°	803.7	804.7	813.9	838.4	735.3	543.3	393.2	340.1	329.8
37.5°	755.7	760.8	768.9	799.6	703.6	502.4	363.5	315.5	306.4
40°	708.7	712.8	721.0	750.6	665.8	461.6	336.0	294.1	285.9
42.5°	660.7	664.8	673.0	706.7	630.1	420.7	309.4	273.7	266.5
45°	610.7	614.8	623.9	658.7	592.3	382.9	285.9	253.3	246.1
47.5°	563.7	564.7	575.9	610.7	553.5	350.3	263.5	233.9	227.7
50°	516.7	517.7	528.0	562.7	514.7	317.6	243.0	213.4	208.3
52.5°	472.8	472.8	478.9	513.7	474.8	288.0	220.6	195.0	192.0
55°	428.9	427.9	429.9	464.6	435.0	261.4	201.2	178.7	175.6
57.5°	387.0	384.0	385.0	416.6	395.2	234.9	182.8	163.4	160.3
60°	345.2	343.1	339.0	369.7	355.4	207.3	164.4	148.1	145.0
62.5°	303.3	301.2	298.2	322.7	315.5	183.8	147.1	133.8	131.7
65°	260.4	260.4	254.3	274.7	273.7	160.3	130.7	119.5	118.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	217.5	215.5	211.4	227.7	230.8	137.9	114.4	105.2	105.2
70°	175.6	175.6	169.5	180.7	187.9	116.4	99.1	92.9	91.9
72.5°	134.8	135.8	131.7	139.9	148.1	95.0	83.7	80.7	79.7
75°	95.0	99.1	98.0	104.2	109.3	74.5	69.4	67.4	67.4
77.5°	58.2	64.3	67.4	72.5	75.6	56.2	55.1	55.1	55.1
80°	37.8	38.8	40.8	46.0	48.0	38.8	39.8	41.9	42.9
82.5°	21.4	21.4	22.5	24.5	26.6	23.5	25.5	27.6	27.6
85°	10.2	9.2	9.2	9.2	9.2	10.2	10.2	11.2	10.2
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)