

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P580007

Luminaire Tested: **HC420D010-HM40525830-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580007  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC420D010-HM40525830-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1979.3 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

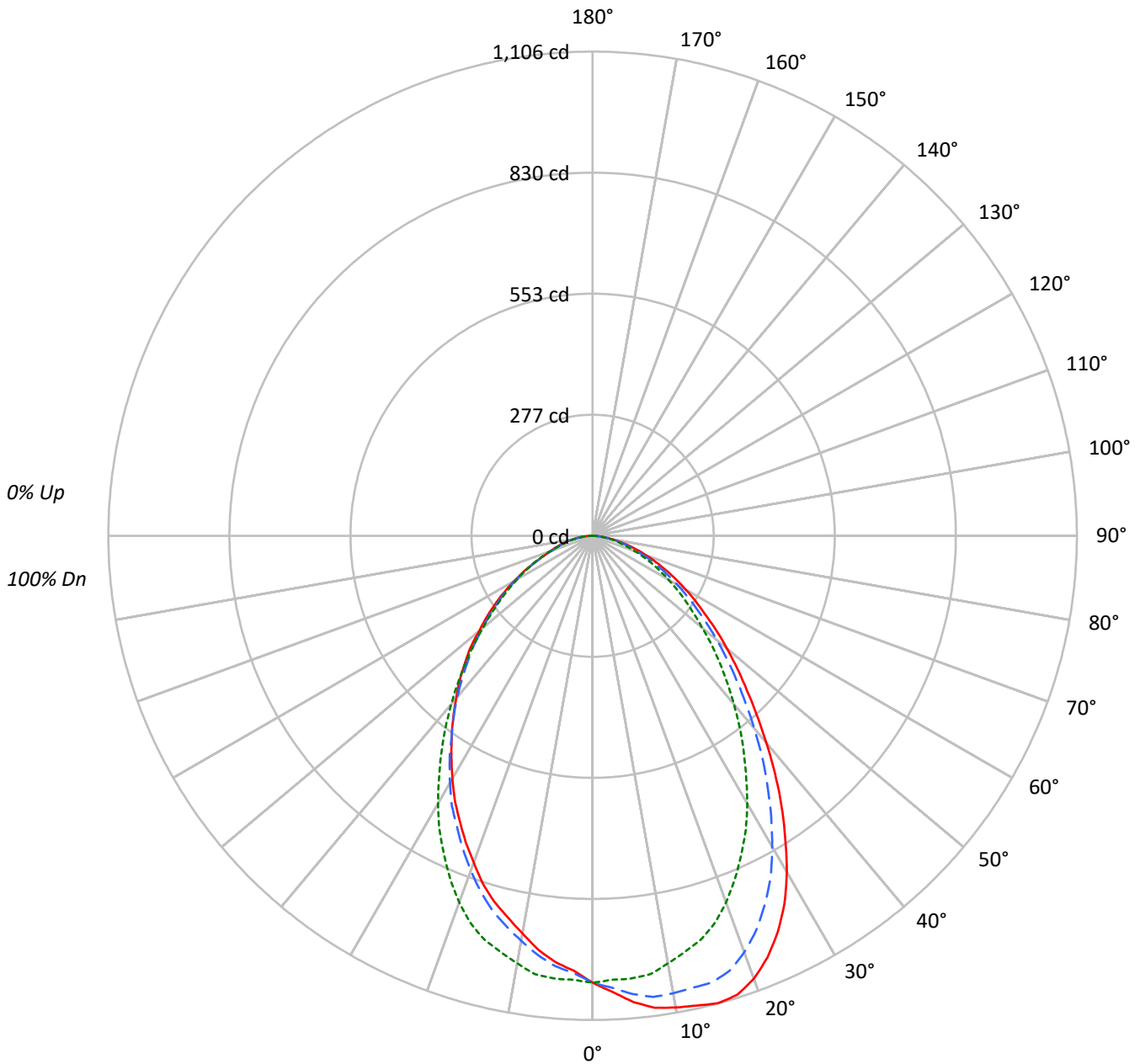
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	125887	125887	125887
5°	132373	125711	121019
10°	137022	124221	115517
15°	141194	121963	110585
20°	141356	116941	104222
25°	136042	109299	97704
30°	126333	100582	91239
35°	113234	90557	84444
40°	99363	80798	78045
45°	86835	71537	71990
50°	76680	62595	64859
55°	67611	55504	58321
60°	60439	49116	51065
65°	53527	43225	43225
70°	46775	36857	36857
75°	39937	31215	34980
80°	31609	27916	31609
85°	20521	24059	29720



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.7	4.9
10°-20°	272.3	13.8
20°-30°	381.5	19.3
30°-40°	393.0	19.9
40°-50°	334.6	16.9
50°-60°	247.9	12.5
60°-70°	155.6	7.9
70°-80°	77.3	3.9
80°-90°	20.3	1.0
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°	750.5	37.9
0°-40°	1143.5	57.8
0°-60°	1726.1	87.2
0°-90°	1979.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1979.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1021	1021	1021	1021	1021	
5°	1069	1051	1015	986	977	103
15°	1106	1056	955	886	866	311
25°	1000	930	803	734	718	457
35°	752	696	601	562	561	469
45°	498	464	410	402	413	386
55°	314	290	258	263	271	284
65°	183	165	148	145	148	183
75°	84	75	66	71	73	90
85°	14	14	17	20	21	19
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°	1020.6	1020.6	1020.6	1020.6	1020.6	1020.6	1020.6	1020.6	1020.6
2.5°	1042.9	1039.0	1033.7	1024.5	1015.3	1007.5	999.6	995.7	994.3
5°	1069.1	1061.2	1050.8	1033.7	1015.3	999.6	986.5	980.0	977.4
7.5°	1087.4	1079.6	1062.5	1036.3	1010.2	986.5	965.5	956.4	953.7
10°	1094.0	1084.8	1061.2	1025.9	991.8	962.9	939.4	927.6	922.3
12.5°	1099.2	1087.4	1057.3	1015.3	973.5	938.0	913.1	897.4	893.5
15°	1105.7	1092.6	1055.9	1004.9	955.1	913.1	885.6	871.3	866.0
17.5°	1099.2	1084.8	1041.6	983.9	927.6	881.7	851.5	838.5	833.3
20°	1076.9	1061.2	1012.7	951.2	890.9	843.7	813.6	800.5	794.0
22.5°	1042.9	1025.9	976.1	910.5	849.0	803.1	774.3	761.1	757.2
25°	999.6	982.6	930.2	863.3	803.1	758.5	733.6	721.9	717.9
27.5°	948.6	931.5	880.4	814.9	757.2	715.4	695.7	683.8	681.3
30°	887.0	869.9	820.1	759.9	706.2	666.9	651.2	642.0	640.6
32.5°	818.8	804.4	758.5	703.6	652.4	619.7	607.9	601.4	600.0
35°	752.0	736.3	695.7	645.9	601.4	572.6	562.0	560.8	560.8
37.5°	683.8	668.1	635.4	589.6	551.6	525.3	521.4	522.7	522.7
40°	617.1	602.6	573.8	535.9	501.8	482.1	480.8	483.5	484.7
42.5°	554.2	542.4	516.2	483.5	454.7	438.8	440.2	445.5	449.4
45°	497.8	487.4	463.7	434.9	410.1	398.2	402.3	408.8	412.7
47.5°	446.8	437.6	415.3	389.1	368.2	360.3	365.5	373.3	378.6
50°	399.6	391.7	370.7	343.3	326.2	320.9	327.6	335.4	338.0
52.5°	357.6	349.8	327.6	304.0	290.9	288.2	294.8	301.3	305.2
55°	314.4	307.9	289.5	268.6	258.1	256.8	263.4	268.6	271.2
57.5°	279.1	272.5	255.4	237.1	227.9	226.6	233.2	237.1	238.5
60°	245.0	238.5	222.7	205.7	199.1	199.1	203.0	205.7	207.0
62.5°	213.6	207.0	192.6	178.1	173.0	173.0	173.0	174.2	178.1
65°	183.4	178.1	165.1	152.0	148.1	145.4	145.4	145.4	148.1
67.5°	155.9	150.7	140.2	128.3	124.4	120.5	119.2	121.8	121.8
70°	129.7	125.8	115.3	106.1	102.2	98.3	96.9	102.2	102.2
72.5°	106.1	102.2	95.7	86.5	82.6	81.2	83.8	86.5	87.7
75°	83.8	79.9	74.7	69.4	65.5	66.9	70.8	72.0	73.4
77.5°	62.9	61.6	56.3	52.4	52.4	53.7	56.3	59.0	60.2
80°	44.5	43.2	40.6	38.0	39.3	42.0	43.2	45.9	44.5
82.5°	27.5	27.5	26.2	26.2	27.5	30.2	31.4	32.8	34.1
85°	14.5	14.5	14.5	15.7	17.0	18.4	19.6	21.0	21.0
87.5°	3.9	5.3	5.3	6.5	7.9	7.9	9.2	9.2	9.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)