

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: P580055

Luminaire Tested: **HC420D010-HM40525927-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580055  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC420D010-HM40525927-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1570.6 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

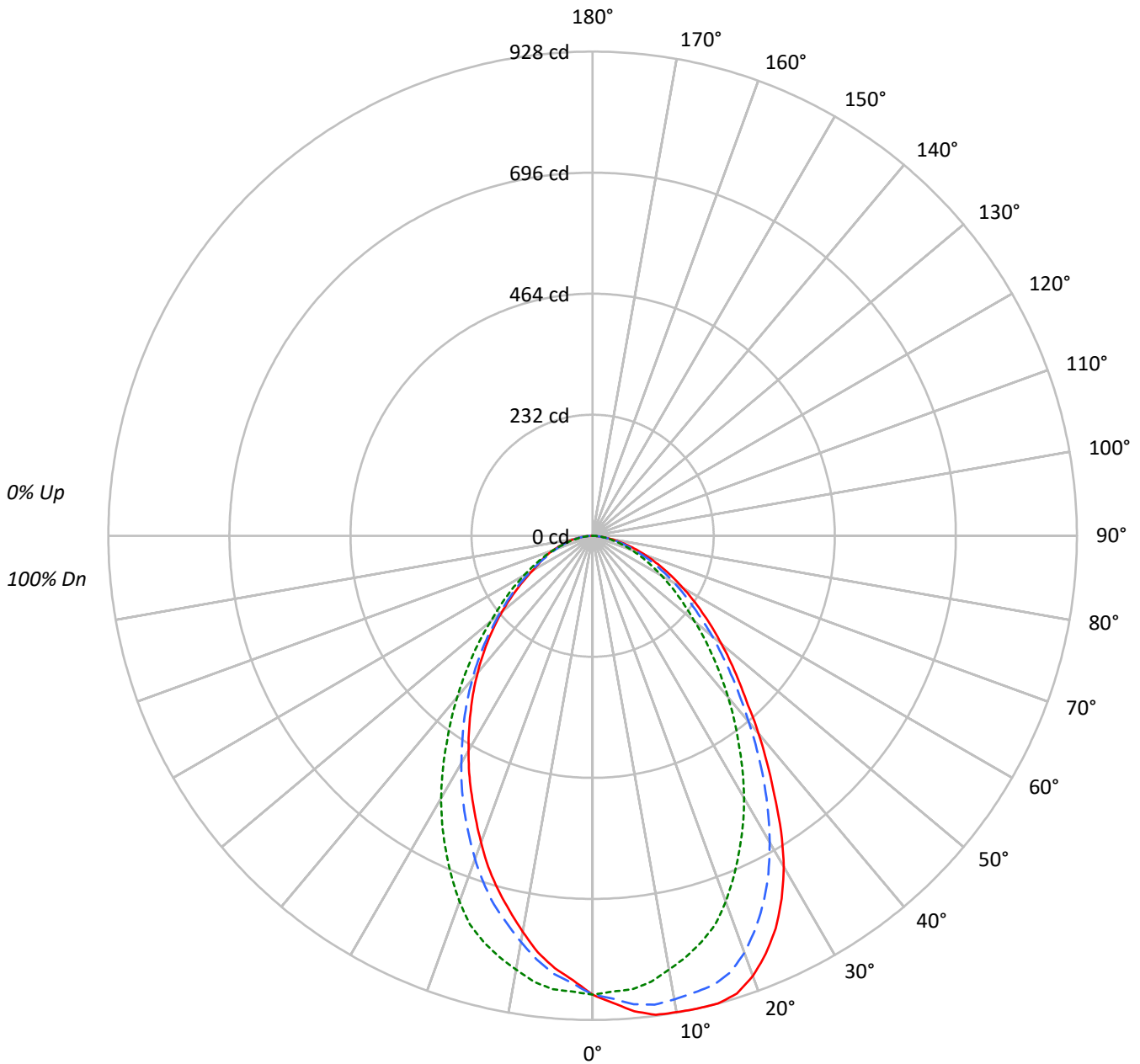
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	108482	108482	108482
5°	113255	108005	103003
10°	116118	105747	96554
15°	118528	102936	89579
20°	117886	97921	82039
25°	112947	90559	74636
30°	104342	82679	67653
35°	91446	73542	61225
40°	79639	64970	55148
45°	69304	56675	49278
50°	61751	48836	43483
55°	55181	42945	37612
60°	49264	37522	32415
65°	43779	32922	30791
70°	38444	28382	28743
75°	32502	24162	26640
80°	25003	20599	24293
85°	14577	16134	20521



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.4	5.2
10°-20°	227.4	14.5
20°-30°	310.7	19.8
30°-40°	312.0	19.9
40°-50°	258.1	16.4
50°-60°	187.0	11.9
60°-70°	118.5	7.5
70°-80°	59.9	3.8
80°-90°	14.6	0.9
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°	620.5	39.5
0°-40°	932.5	59.4
0°-60°	1377.6	87.7
0°-90°	1570.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1570.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	880	880	880	880	880	
5°	915	901	872	843	832	88
15°	928	892	806	732	702	261
25°	830	775	665	582	548	379
35°	607	571	488	428	407	381
45°	397	375	325	293	282	309
55°	257	234	200	182	175	231
65°	150	134	113	101	106	149
75°	68	59	51	53	56	73
85°	10	10	11	13	14	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°	879.5	879.5	879.5	879.5	879.5	879.5	879.5	879.5	879.5
2.5°	896.0	892.9	887.8	881.6	874.4	866.1	858.9	854.7	852.7
5°	914.7	910.6	901.3	887.8	872.3	856.8	843.3	835.0	831.9
7.5°	926.1	919.9	906.5	885.7	862.0	839.1	819.5	808.2	805.1
10°	927.1	919.9	902.3	874.4	844.3	814.4	790.5	774.0	770.9
12.5°	928.2	918.9	897.1	864.0	826.8	789.5	760.6	740.8	735.7
15°	928.2	918.9	891.9	852.7	806.1	763.7	731.6	708.8	701.5
17.5°	919.9	909.6	877.5	831.9	781.2	733.6	696.3	672.6	665.4
20°	898.1	886.7	850.5	800.8	746.0	696.3	659.2	634.3	625.0
22.5°	867.1	853.7	815.4	761.6	706.8	656.0	619.8	593.9	585.7
25°	829.9	816.4	775.0	722.3	665.4	617.8	581.5	557.7	548.4
27.5°	784.3	769.9	729.5	676.7	624.0	576.4	543.2	521.5	512.3
30°	732.6	717.1	678.8	628.1	580.5	535.0	502.8	485.3	475.0
32.5°	672.6	659.2	625.0	579.5	535.0	491.5	464.6	449.1	440.8
35°	607.3	600.1	571.2	531.9	488.4	452.1	428.4	414.0	406.6
37.5°	549.4	542.2	517.4	484.3	446.0	412.8	393.2	380.8	374.6
40°	494.6	488.4	464.6	436.7	403.5	374.6	358.0	348.7	342.5
42.5°	440.8	437.7	418.1	392.2	363.1	338.4	324.9	317.7	312.4
45°	397.3	393.2	374.6	349.7	324.9	304.2	292.8	287.7	282.5
47.5°	359.0	353.8	334.2	312.4	289.7	271.2	260.7	255.6	253.5
50°	321.8	316.7	299.0	277.3	254.5	241.1	232.8	227.7	226.6
52.5°	288.7	283.5	263.8	243.2	225.6	214.1	206.9	201.8	199.7
55°	256.6	250.4	233.9	214.1	199.7	189.4	182.1	177.0	174.9
57.5°	227.7	221.5	206.9	188.3	174.9	165.5	159.3	154.2	152.1
60°	199.7	194.5	181.1	163.4	152.1	143.8	137.6	133.5	131.4
62.5°	173.9	169.6	156.2	140.7	131.4	124.2	118.9	114.8	116.9
65°	150.0	145.9	133.5	120.0	112.8	105.5	101.4	101.4	105.5
67.5°	127.3	123.2	112.8	101.4	95.2	90.0	86.9	90.0	93.1
70°	106.6	102.4	93.1	83.8	78.7	74.6	74.6	77.7	79.7
72.5°	86.9	82.8	75.6	68.2	64.1	61.0	64.1	66.2	68.2
75°	68.2	65.1	59.0	53.8	50.7	49.7	52.8	54.8	55.9
77.5°	50.7	48.6	44.5	40.4	38.3	39.3	42.4	43.5	44.5
80°	35.2	34.2	31.1	29.0	29.0	30.1	32.1	33.1	34.2
82.5°	21.7	21.7	19.6	18.6	19.6	21.7	22.7	23.7	23.7
85°	10.3	11.4	10.3	10.3	11.4	13.4	13.4	14.5	14.5
87.5°	3.1	3.1	4.1	4.1	5.2	5.2	5.2	5.2	6.2
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)