

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: P581441

Luminaire Tested: **HC407D010-HM40525830-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581441  
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: HC407D010-HM40525830-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 868.0 lumens  
Efficiency: N/A  
Efficacy: 108.5 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

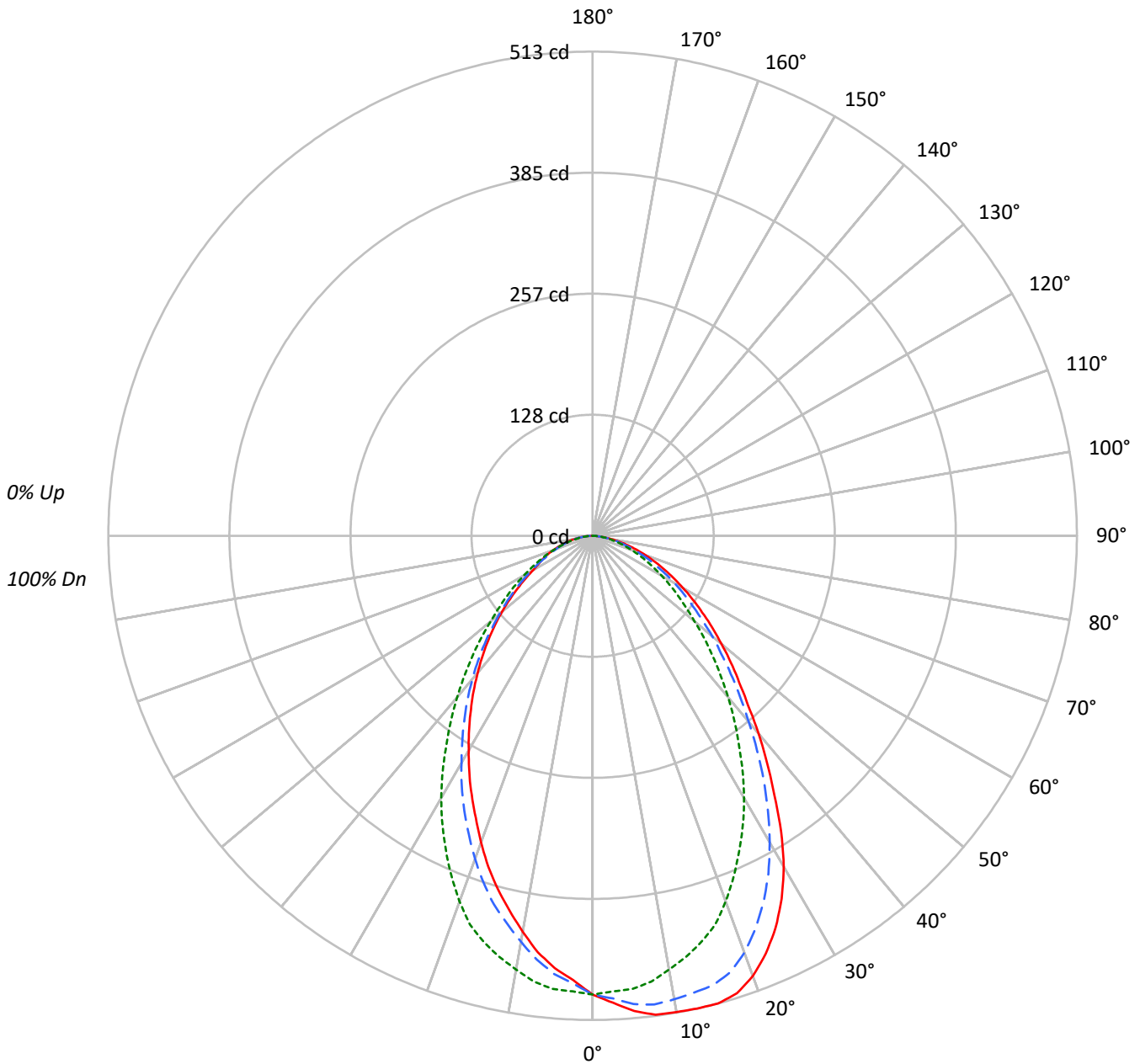
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	59946	59946	59946
5°	62589	59692	56931
10°	64177	58453	53368
15°	65508	56889	49508
20°	65158	54119	45338
25°	62414	50043	41237
30°	57669	45691	37387
35°	50549	40641	33850
40°	44006	35907	30464
45°	38306	31329	27230
50°	34138	26999	24044
55°	30494	23741	20773
60°	27235	20747	17910
65°	24224	18212	17045
70°	21242	15688	15868
75°	18014	13344	14678
80°	13851	11365	13425
85°	8067	8916	11322



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.6	5.2
10°-20°	125.7	14.5
20°-30°	171.7	19.8
30°-40°	172.4	19.9
40°-50°	142.6	16.4
50°-60°	103.4	11.9
60°-70°	65.5	7.5
70°-80°	33.1	3.8
80°-90°	8.1	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°	343.0	39.5
0°-40°	515.4	59.4
0°-60°	761.4	87.7
0°-90°	868.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	868.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	486	486	486	486	486	
5°	506	498	482	466	460	48
15°	513	493	446	404	388	144
25°	459	428	368	321	303	210
35°	336	316	270	237	225	210
45°	220	207	180	162	156	171
55°	142	129	110	101	97	128
65°	83	74	62	56	58	83
75°	38	32	28	29	31	40
85°	6	6	6	7	8	8
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°	486.0	486.0	486.0	486.0	486.0	486.0	486.0	486.0	486.0
2.5°	495.3	493.6	490.7	487.2	483.2	478.6	474.7	472.4	471.2
5°	505.5	503.2	498.1	490.7	482.1	473.5	466.1	461.5	459.8
7.5°	511.9	508.3	500.9	489.6	476.4	463.7	452.9	446.7	445.0
10°	512.4	508.3	498.7	483.2	466.7	450.1	436.9	427.8	426.1
12.5°	513.0	507.8	495.8	477.5	456.9	436.3	420.4	409.5	406.6
15°	513.0	507.8	493.0	471.2	445.5	422.1	404.3	391.7	387.7
17.5°	508.3	502.7	484.9	459.8	431.8	405.5	384.9	371.7	367.7
20°	496.4	490.1	470.1	442.7	412.3	384.9	364.3	350.5	345.4
22.5°	479.2	471.8	450.6	420.9	390.6	362.6	342.5	328.2	323.6
25°	458.6	451.2	428.3	399.2	367.7	341.4	321.4	308.3	303.0
27.5°	433.5	425.5	403.2	373.9	344.8	318.5	300.2	288.3	283.0
30°	404.9	396.3	375.2	347.1	320.8	295.7	277.9	268.2	262.5
32.5°	371.7	364.3	345.4	320.2	295.7	271.6	256.7	248.2	243.6
35°	335.7	331.7	315.7	293.9	269.9	249.9	236.7	228.7	224.8
37.5°	303.6	299.6	286.0	267.7	246.5	228.2	217.4	210.4	207.0
40°	273.3	269.9	256.7	241.4	223.0	207.0	197.9	192.7	189.2
42.5°	243.6	241.9	231.0	216.8	200.7	187.0	179.6	175.6	172.7
45°	219.6	217.4	207.0	193.3	179.6	168.1	161.8	159.0	156.1
47.5°	198.5	195.6	184.7	172.7	160.1	149.9	144.1	141.2	140.1
50°	177.9	175.0	165.2	153.3	140.7	133.3	128.7	125.9	125.3
52.5°	159.5	156.7	145.8	134.4	124.6	118.4	114.4	111.5	110.4
55°	141.8	138.4	129.3	118.4	110.4	104.7	100.6	97.8	96.6
57.5°	125.9	122.3	114.4	104.1	96.6	91.5	88.1	85.2	84.1
60°	110.4	107.5	100.0	90.4	84.1	79.5	76.0	73.7	72.6
62.5°	96.0	93.8	86.4	77.7	72.6	68.6	65.8	63.5	64.6
65°	83.0	80.7	73.7	66.3	62.4	58.4	56.0	56.0	58.4
67.5°	70.3	68.1	62.4	56.0	52.6	49.7	48.0	49.7	51.4
70°	58.9	56.6	51.4	46.3	43.5	41.2	41.2	42.9	44.0
72.5°	48.0	45.7	41.8	37.8	35.5	33.7	35.5	36.6	37.8
75°	37.8	36.1	32.5	29.7	28.0	27.4	29.1	30.3	30.8
77.5°	28.0	26.9	24.6	22.3	21.2	21.7	23.4	24.0	24.6
80°	19.5	18.9	17.2	16.0	16.0	16.6	17.8	18.3	18.9
82.5°	12.1	12.1	10.8	10.2	10.8	12.1	12.6	13.2	13.2
85°	5.7	6.3	5.7	5.7	6.3	7.4	7.4	8.0	8.0
87.5°	1.7	1.7	2.3	2.3	2.8	2.8	2.8	2.8	3.4
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)