

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: P579701

Luminaire Tested: **HC410D010-HM40525827-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579701  
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: HC410D010-HM40525827-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

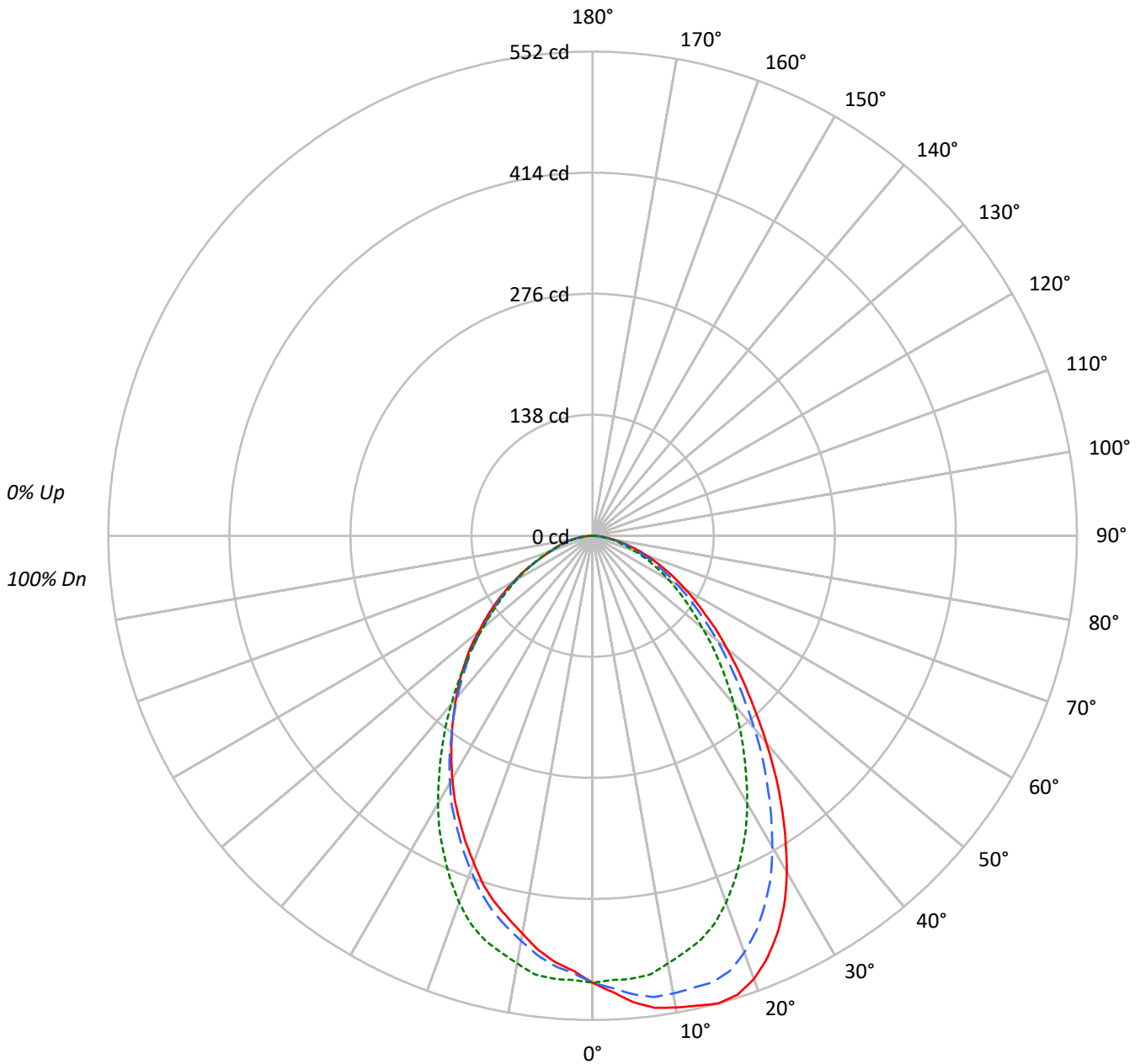
Lumens per Lamp: N/A  
Luminaire Lumens: 988.2 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					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°	62857	62857	62857
5°	66081	62775	60423
10°	68398	62010	57677
15°	70489	60886	55203
20°	70579	58385	52032
25°	67926	54561	48791
30°	63067	50220	45562
35°	56527	45203	42147
40°	49609	40335	38982
45°	43348	35707	35951
50°	38282	31240	32391
55°	33741	27698	29117
60°	30170	24546	25483
65°	26734	21598	21598
70°	23369	18393	18393
75°	19968	15584	17442
80°	15769	13922	15769
85°	10190	12029	14860



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.3	4.9
10°-20°	136.0	13.8
20°-30°	190.5	19.3
30°-40°	196.2	19.9
40°-50°	167.1	16.9
50°-60°	123.8	12.5
60°-70°	77.7	7.9
70°-80°	38.6	3.9
80°-90°	10.1	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°	374.7	37.9
0°-40°	570.9	57.8
0°-60°	861.8	87.2
0°-90°	988.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	988.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	510	510	510	510	510	
5°	534	525	507	492	488	51
15°	552	527	477	442	432	155
25°	499	464	401	366	358	228
35°	375	347	300	281	280	234
45°	248	232	205	201	206	193
55°	157	144	129	131	135	142
65°	92	82	74	73	74	91
75°	42	37	33	35	37	45
85°	7	7	8	10	10	9
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°	509.6	509.6	509.6	509.6	509.6	509.6	509.6	509.6	509.6
2.5°	520.6	518.7	516.1	511.5	507.0	503.0	499.1	497.1	496.5
5°	533.7	529.9	524.6	516.1	507.0	499.1	492.5	489.2	488.0
7.5°	542.9	539.0	530.5	517.4	504.4	492.5	482.1	477.5	476.1
10°	546.1	541.6	529.9	512.2	495.1	480.8	469.0	463.2	460.5
12.5°	548.7	542.9	527.9	507.0	486.0	468.3	455.9	448.0	446.1
15°	552.0	545.6	527.2	501.7	476.8	455.9	442.2	434.9	432.3
17.5°	548.7	541.6	520.1	491.3	463.2	440.2	425.2	418.7	416.1
20°	537.7	529.9	505.6	474.9	444.8	421.3	406.2	399.7	396.4
22.5°	520.6	512.2	487.3	454.6	423.9	400.9	386.6	380.1	378.0
25°	499.1	490.6	464.4	431.1	400.9	378.7	366.3	360.4	358.5
27.5°	473.5	465.1	439.6	406.8	378.0	357.1	347.3	341.4	340.1
30°	442.8	434.4	409.5	379.4	352.6	333.0	325.1	320.5	319.9
32.5°	408.8	401.6	378.7	351.3	325.7	309.4	303.5	300.2	299.6
35°	375.4	367.6	347.3	322.5	300.2	285.9	280.6	279.9	279.9
37.5°	341.4	333.5	317.3	294.4	275.4	262.3	260.4	260.9	260.9
40°	308.1	300.9	286.5	267.5	250.5	240.7	240.0	241.4	242.1
42.5°	276.6	270.8	257.8	241.4	227.0	219.2	219.7	222.4	224.4
45°	248.5	243.3	231.6	217.1	204.7	198.8	200.9	204.0	206.1
47.5°	223.0	218.5	207.3	194.3	183.8	179.9	182.5	186.4	189.0
50°	199.5	195.6	185.2	171.4	162.8	160.2	163.5	167.4	168.8
52.5°	178.6	174.7	163.5	151.8	145.2	144.0	147.1	150.4	152.4
55°	156.9	153.7	144.5	134.1	128.8	128.3	131.4	134.1	135.4
57.5°	139.3	136.1	127.6	118.4	113.8	113.1	116.4	118.4	119.0
60°	122.3	119.0	111.2	102.6	99.5	99.5	101.4	102.6	103.3
62.5°	106.6	103.3	96.2	89.0	86.4	86.4	86.4	86.9	89.0
65°	91.6	89.0	82.4	75.9	74.0	72.6	72.6	72.6	74.0
67.5°	77.8	75.2	70.0	64.1	62.1	60.2	59.5	60.9	60.9
70°	64.8	62.8	57.6	53.0	51.0	49.0	48.4	51.0	51.0
72.5°	53.0	51.0	47.8	43.1	41.2	40.5	41.9	43.1	43.8
75°	41.9	39.9	37.3	34.7	32.7	33.3	35.3	36.0	36.6
77.5°	31.4	30.7	28.1	26.2	26.2	26.9	28.1	29.5	30.0
80°	22.2	21.6	20.3	19.0	19.6	20.9	21.6	22.9	22.2
82.5°	13.8	13.8	13.1	13.1	13.8	15.0	15.7	16.4	17.0
85°	7.2	7.2	7.2	7.9	8.5	9.1	9.8	10.5	10.5
87.5°	1.9	2.6	2.6	3.3	3.9	3.9	4.6	4.6	4.6
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)