

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: P579772

Luminaire Tested: **HC410D010-HM40525927-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579772  
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: HC410D010-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**

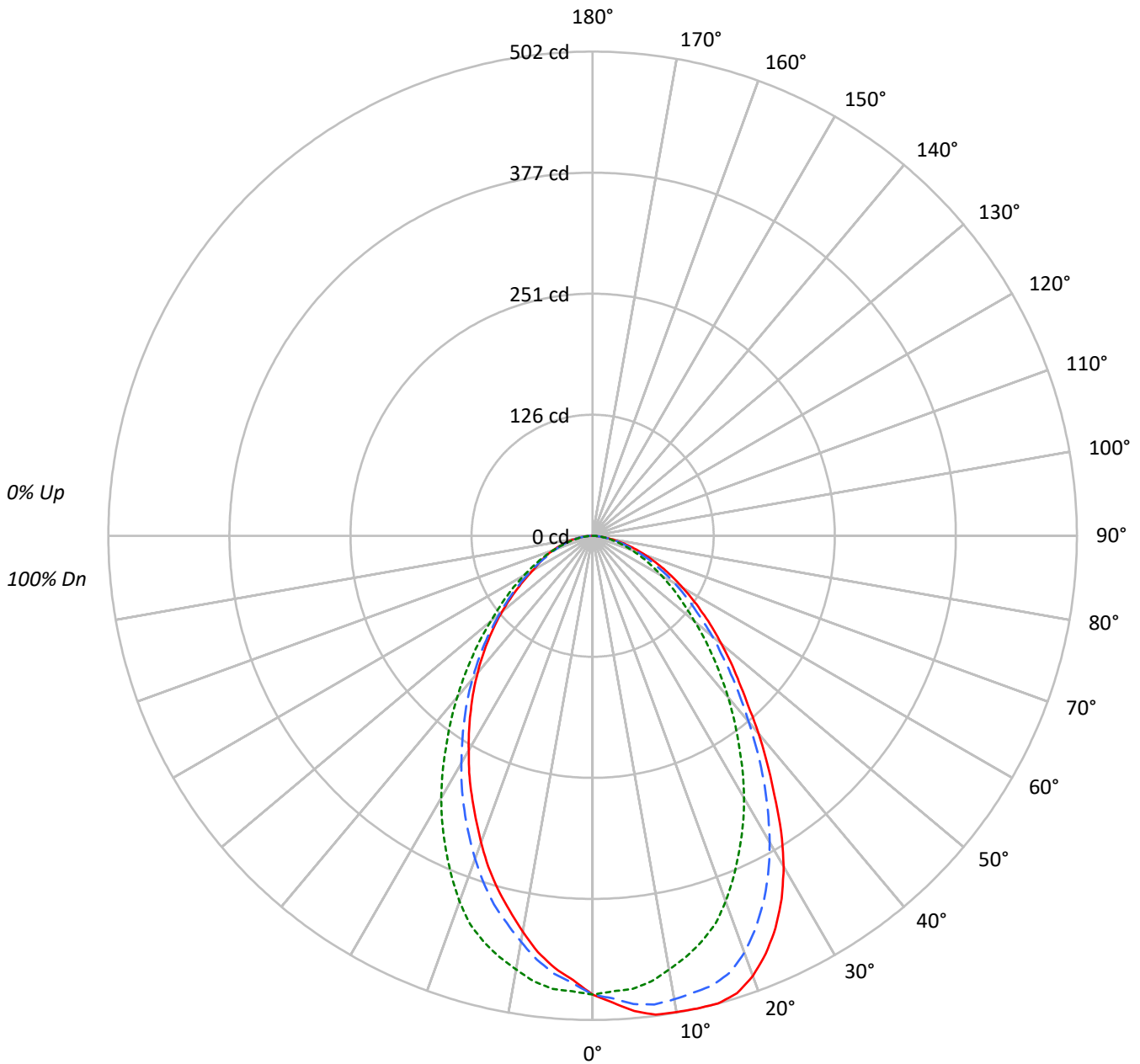
Lumens per Lamp: N/A  
Luminaire Lumens: 849.4 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87					87			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76					76			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66					66			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58					58			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52					52			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47					47			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42					42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38					38			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35					35			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

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

	0°	90°	180°
0°	58663	58663	58663
5°	61252	58404	55705
10°	62800	57188	52204
15°	64104	55663	48448
20°	63754	52951	44366
25°	61067	48968	40366
30°	56415	44708	36575
35°	49450	39767	33112
40°	43056	35150	29836
45°	37487	30649	26637
50°	33389	26423	23526
55°	29827	23225	20343
60°	26643	20303	17515
65°	23670	17803	16665
70°	20773	15363	15544
75°	17633	13058	14440
80°	13496	11152	13070
85°	7925	8633	11180



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.6	5.2
10°-20°	123.0	14.5
20°-30°	168.0	19.8
30°-40°	168.7	19.9
40°-50°	139.6	16.4
50°-60°	101.1	11.9
60°-70°	64.1	7.5
70°-80°	32.4	3.8
80°-90°	7.9	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°	335.6	39.5
0°-40°	504.3	59.4
0°-60°	745.0	87.7
0°-90°	849.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	849.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	476	476	476	476	476	
5°	495	487	472	456	450	47
15°	502	482	436	396	379	141
25°	449	419	360	314	297	205
35°	328	309	264	232	220	206
45°	215	203	176	158	153	167
55°	139	126	108	98	95	125
65°	81	72	61	55	57	81
75°	37	32	27	29	30	39
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°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6
2.5°	484.6	482.9	480.1	476.7	472.8	468.4	464.4	462.1	461.1
5°	494.7	492.4	487.4	480.1	471.7	463.3	456.0	451.6	449.9
7.5°	500.8	497.4	490.1	479.0	466.1	453.8	443.1	437.0	435.3
10°	501.4	497.4	488.0	472.8	456.6	440.4	427.5	418.6	416.8
12.5°	502.0	496.9	485.1	467.3	447.1	427.0	411.3	400.7	397.8
15°	502.0	496.9	482.3	461.1	435.9	413.0	395.6	383.3	379.4
17.5°	497.4	491.8	474.5	449.9	422.4	396.7	376.6	363.7	359.8
20°	485.7	479.6	460.0	433.1	403.4	376.6	356.4	343.0	338.0
22.5°	468.9	461.7	441.0	411.8	382.1	354.7	335.1	321.1	316.7
25°	448.7	441.4	419.1	390.6	359.8	334.0	314.4	301.6	296.6
27.5°	424.1	416.3	394.4	366.0	337.4	311.7	293.7	282.0	277.0
30°	396.1	387.7	367.1	339.7	313.9	289.3	272.0	262.4	256.8
32.5°	363.7	356.4	338.0	313.4	289.3	265.8	251.3	242.8	238.4
35°	328.4	324.6	308.9	287.6	264.1	244.6	231.7	223.8	219.9
37.5°	297.1	293.1	279.7	261.9	241.1	223.3	212.6	205.9	202.6
40°	267.4	264.1	251.3	236.1	218.3	202.6	193.6	188.6	185.3
42.5°	238.4	236.7	226.0	212.1	196.4	183.0	175.7	171.8	169.0
45°	214.9	212.6	202.6	189.1	175.7	164.6	158.4	155.6	152.7
47.5°	194.1	191.4	180.7	169.0	156.7	146.6	141.0	138.2	137.1
50°	174.0	171.3	161.7	150.0	137.7	130.4	125.9	123.1	122.6
52.5°	156.1	153.3	142.7	131.4	122.0	115.8	111.9	109.1	108.0
55°	138.7	135.4	126.4	115.8	108.0	102.4	98.4	95.7	94.6
57.5°	123.1	119.7	111.9	101.9	94.6	89.6	86.1	83.4	82.3
60°	108.0	105.2	97.9	88.4	82.3	77.7	74.4	72.1	71.0
62.5°	94.0	91.7	84.4	76.1	71.0	67.1	64.3	62.1	63.3
65°	81.1	78.9	72.1	64.9	61.0	57.1	54.9	54.9	57.1
67.5°	68.8	66.6	61.0	54.9	51.4	48.7	47.0	48.7	50.4
70°	57.6	55.4	50.4	45.3	42.6	40.3	40.3	42.0	43.1
72.5°	47.0	44.7	40.9	37.0	34.7	33.0	34.7	35.8	37.0
75°	37.0	35.3	31.9	29.1	27.4	26.9	28.6	29.7	30.3
77.5°	27.4	26.3	24.0	21.8	20.7	21.3	23.0	23.6	24.0
80°	19.0	18.4	16.8	15.7	15.7	16.3	17.3	17.9	18.4
82.5°	11.7	11.7	10.6	10.1	10.6	11.7	12.3	12.9	12.9
85°	5.6	6.1	5.6	5.6	6.1	7.3	7.3	7.9	7.9
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)