

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: P579773

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579773  
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-HM40525927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 845.4 lumens  
Efficiency: N/A  
Efficacy: 85.4 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

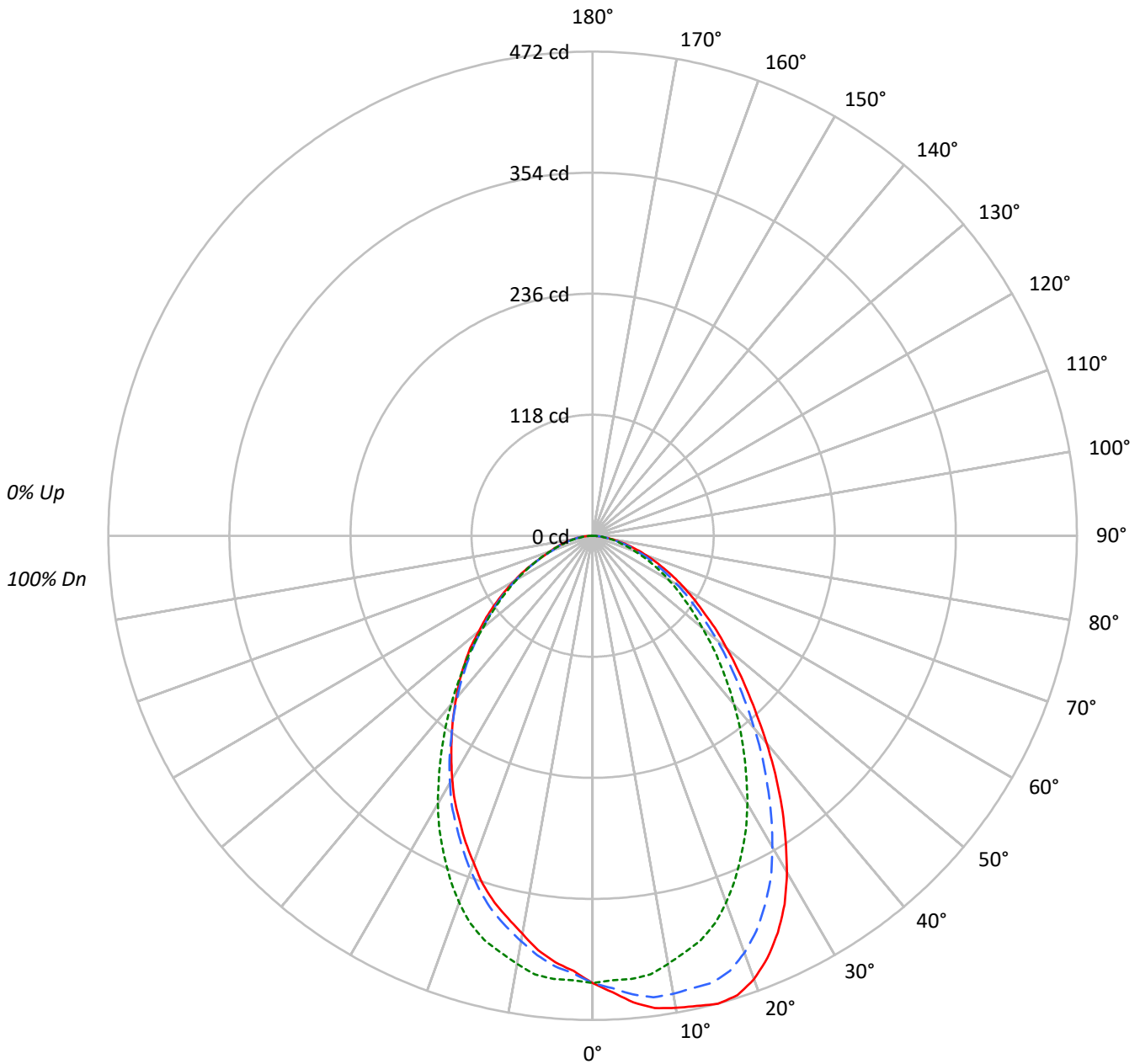
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	53779	53779	53779
5°	56547	53699	51681
10°	58529	53068	49348
15°	60311	52100	47248
20°	60380	49945	44511
25°	58113	46681	41741
30°	53951	42970	38982
35°	48380	38668	36063
40°	42444	34506	33330
45°	37103	30544	30753
50°	32756	26731	27709
55°	28881	23720	24902
60°	25829	20969	21808
65°	22853	18475	18475
70°	19979	15760	15760
75°	17061	13344	14917
80°	13496	11933	13496
85°	8633	10331	12737



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.3	4.9
10°-20°	116.3	13.8
20°-30°	163.0	19.3
30°-40°	167.9	19.9
40°-50°	142.9	16.9
50°-60°	105.9	12.5
60°-70°	66.5	7.9
70°-80°	33.0	3.9
80°-90°	8.7	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°	320.6	37.9
0°-40°	488.5	57.8
0°-60°	737.3	87.2
0°-90°	845.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	845.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	436	436	436	436	436	
5°	457	449	434	421	417	44
15°	472	451	408	378	370	133
25°	427	397	343	313	307	195
35°	321	297	257	240	240	200
45°	213	198	175	172	176	165
55°	134	124	110	112	116	121
65°	78	71	63	62	63	78
75°	36	32	28	30	31	38
85°	6	6	7	8	9	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°	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0
2.5°	445.4	443.8	441.5	437.7	433.7	430.4	427.0	425.3	424.7
5°	456.7	453.3	448.8	441.5	433.7	427.0	421.4	418.6	417.4
7.5°	464.5	461.1	453.8	442.7	431.4	421.4	412.4	408.5	407.4
10°	467.3	463.4	453.3	438.1	423.7	411.3	401.3	396.3	394.0
12.5°	469.5	464.5	451.6	433.7	415.8	400.7	390.1	383.4	381.7
15°	472.3	466.7	451.1	429.3	408.0	390.1	378.3	372.1	370.0
17.5°	469.5	463.4	444.8	420.3	396.3	376.7	363.7	358.1	356.0
20°	460.0	453.3	432.6	406.3	380.5	360.4	347.5	342.0	339.1
22.5°	445.4	438.1	417.0	389.0	362.7	343.0	330.7	325.1	323.4
25°	427.0	419.7	397.3	368.8	343.0	324.0	313.4	308.4	306.7
27.5°	405.1	397.8	376.1	348.1	323.4	305.6	297.1	292.1	291.0
30°	378.8	371.6	350.3	324.6	301.7	284.8	278.1	274.3	273.7
32.5°	349.7	343.6	324.0	300.5	278.7	264.7	259.7	256.8	256.3
35°	321.3	314.5	297.1	275.9	256.8	244.6	240.1	239.5	239.5
37.5°	292.1	285.4	271.4	251.8	235.6	224.4	222.7	223.3	223.3
40°	263.6	257.4	245.1	228.9	214.3	206.0	205.4	206.5	207.0
42.5°	236.7	231.7	220.5	206.5	194.1	187.4	188.0	190.3	192.0
45°	212.7	208.1	198.1	185.8	175.1	170.1	171.8	174.6	176.3
47.5°	190.8	186.9	177.4	166.3	157.3	153.9	156.1	159.5	161.7
50°	170.7	167.3	158.4	146.6	139.3	137.1	139.9	143.3	144.4
52.5°	152.7	149.4	139.9	129.8	124.3	123.1	125.9	128.7	130.4
55°	134.3	131.6	123.7	114.7	110.3	109.7	112.4	114.7	115.8
57.5°	119.1	116.4	109.1	101.3	97.4	96.8	99.6	101.3	101.9
60°	104.7	101.9	95.1	87.9	85.0	85.0	86.7	87.9	88.4
62.5°	91.3	88.4	82.3	76.1	73.9	73.9	73.9	74.4	76.1
65°	78.3	76.1	70.6	64.9	63.3	62.1	62.1	62.1	63.3
67.5°	66.6	64.4	59.9	54.9	53.1	51.4	50.9	52.0	52.0
70°	55.4	53.7	49.3	45.3	43.7	42.0	41.4	43.7	43.7
72.5°	45.3	43.7	40.9	37.0	35.3	34.7	35.8	37.0	37.4
75°	35.8	34.1	31.9	29.7	28.0	28.6	30.3	30.7	31.3
77.5°	26.9	26.3	24.0	22.4	22.4	23.0	24.0	25.1	25.7
80°	19.0	18.4	17.3	16.3	16.8	17.9	18.4	19.6	19.0
82.5°	11.7	11.7	11.2	11.2	11.7	12.9	13.4	14.0	14.6
85°	6.1	6.1	6.1	6.7	7.3	7.9	8.4	9.0	9.0
87.5°	1.7	2.3	2.3	2.8	3.4	3.4	3.9	3.9	3.9
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)