

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: P579699

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC410D010-HM40525827-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

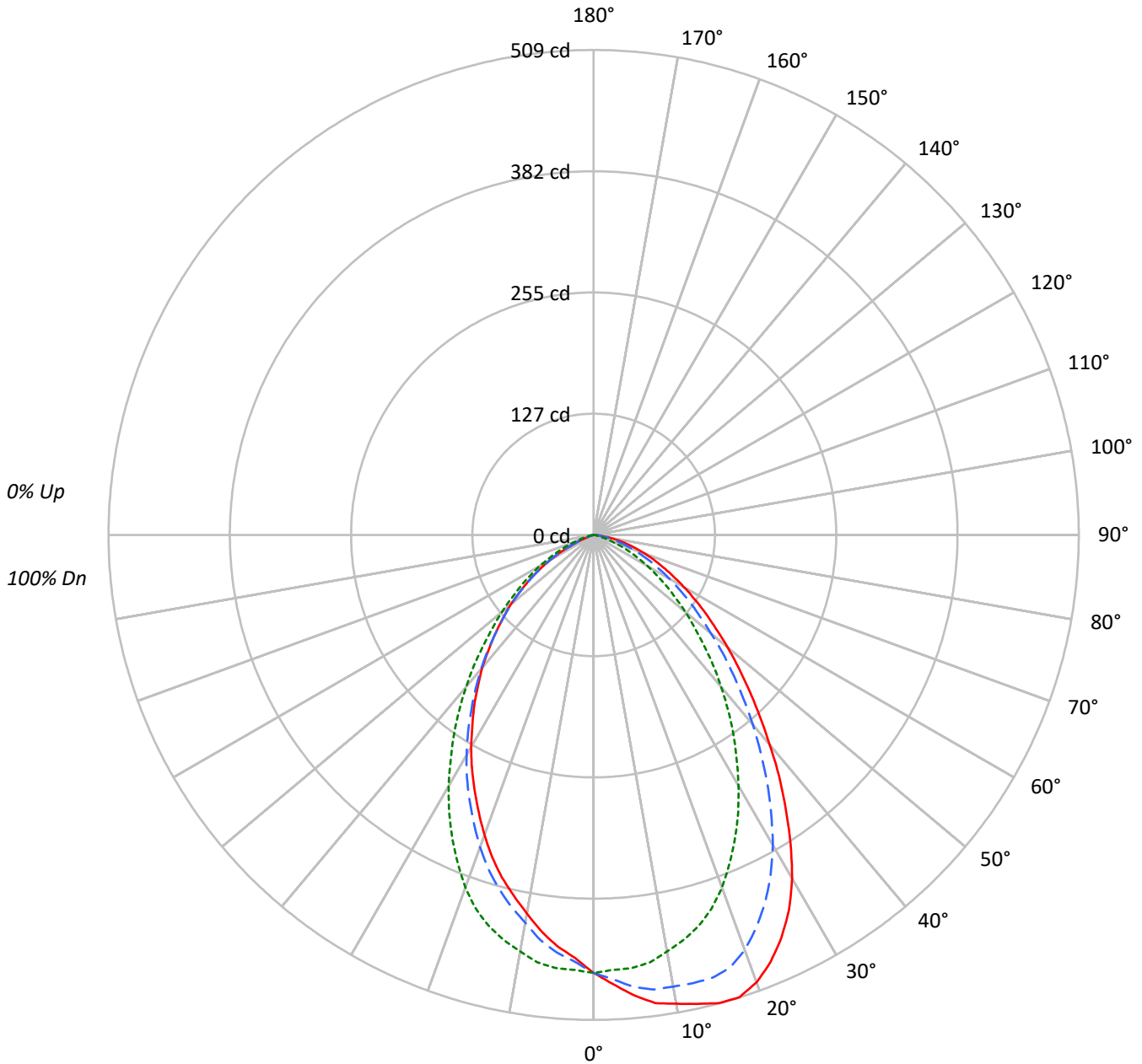
Lumens per Lamp: N/A  
Luminaire Lumens: 793.9 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									
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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

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

	0°	90°	180°
0°	56690	56690	56690
5°	60064	56498	53675
10°	62574	55598	50525
15°	64959	54271	47503
20°	65578	51665	43946
25°	63448	47784	40217
30°	59321	43312	36604
35°	52868	38488	32886
40°	46212	33475	29257
45°	40260	28398	25328
50°	35135	24082	21703
55°	30795	19978	17569
60°	26939	16134	12902
65°	23495	12025	7238
70°	20520	7790	2344
75°	16823	4051	620
80°	12502	1847	497
85°	7359	991	991



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.4	5.5
10°-20°	121.4	15.3
20°-30°	167.9	21.1
30°-40°	168.8	21.3
40°-50°	136.2	17.2
50°-60°	92.1	11.6
60°-70°	46.9	5.9
70°-80°	15.0	1.9
80°-90°	2.3	0.3
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°	332.7	41.9
0°-40°	501.5	63.2
0°-60°	729.8	91.9
0°-90°	793.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	793.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	460	460	460	460	460	
5°	485	476	456	440	434	47
15°	509	481	425	384	372	143
25°	466	426	351	308	296	213
35°	351	317	256	224	218	219
45°	231	207	163	145	145	179
55°	143	124	93	81	82	129
65°	80	65	41	27	25	81
75°	35	25	8	2	1	38
85°	5	3	1	1	1	7
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°	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6
2.5°	472.0	469.4	466.8	462.3	457.0	451.8	448.5	445.9	444.6
5°	485.1	481.8	476.0	466.2	456.3	447.2	440.1	435.5	433.5
7.5°	495.6	491.0	481.3	467.5	452.5	438.0	428.9	422.4	419.8
10°	499.6	494.3	481.3	462.9	443.9	426.3	413.2	406.7	403.4
12.5°	504.1	498.2	481.8	459.0	435.5	414.6	399.6	391.0	387.7
15°	508.7	500.8	481.3	453.2	425.0	400.8	384.4	376.0	372.0
17.5°	508.7	499.6	476.0	443.3	411.3	385.8	367.5	357.7	354.4
20°	499.6	489.1	463.6	427.7	393.6	366.1	348.5	338.7	334.8
22.5°	485.1	473.4	445.9	408.7	372.7	345.8	328.2	319.1	315.1
25°	466.2	454.4	425.6	387.0	351.1	324.3	307.9	299.4	295.5
27.5°	443.9	430.8	402.1	363.6	328.2	302.7	287.7	279.8	276.5
30°	416.5	404.1	376.0	338.0	304.1	280.5	266.7	259.6	257.0
32.5°	384.4	373.9	346.5	311.2	279.2	257.6	245.2	239.3	236.7
35°	351.1	341.3	317.2	284.4	255.6	235.3	223.6	219.6	218.4
37.5°	319.8	311.2	287.7	257.6	231.5	213.8	203.4	200.7	199.4
40°	287.0	281.2	259.6	232.2	207.9	192.2	183.7	181.7	181.7
42.5°	257.6	251.0	232.2	207.2	185.7	170.0	164.1	162.2	162.8
45°	230.8	224.3	206.7	183.7	162.8	149.8	145.2	145.2	145.2
47.5°	206.0	200.1	183.7	160.2	143.2	132.7	128.1	128.1	128.8
50°	183.1	179.1	160.8	140.5	125.5	115.7	112.4	111.8	113.1
52.5°	161.5	156.9	140.5	122.2	107.9	100.0	96.7	96.2	96.7
55°	143.2	137.9	123.6	105.9	92.9	85.0	81.0	80.5	81.7
57.5°	125.5	121.7	106.6	90.9	78.4	70.7	67.4	66.0	66.7
60°	109.2	105.3	91.5	76.5	65.4	57.6	52.9	51.7	52.3
62.5°	94.1	90.9	77.8	63.4	52.3	45.1	40.5	37.2	38.6
65°	80.5	77.2	65.4	51.0	41.2	33.3	26.9	24.2	24.8
67.5°	68.6	64.8	53.6	40.5	30.7	22.2	15.0	13.8	13.8
70°	56.9	52.9	43.1	31.4	21.6	11.7	6.5	6.5	6.5
72.5°	45.7	42.4	33.3	23.6	13.8	5.2	2.6	2.6	2.6
75°	35.3	32.7	24.8	16.4	8.5	2.6	1.9	1.3	1.3
77.5°	26.2	23.6	17.6	11.2	5.2	1.3	1.3	1.3	1.3
80°	17.6	15.7	11.7	6.5	2.6	0.7	0.7	0.7	0.7
82.5°	10.5	9.1	6.5	3.3	1.3	0.7	0.7	0.7	0.7
85°	5.2	3.9	2.6	1.3	0.7	0.7	0.7	0.7	0.7
87.5°	1.3	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
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)