

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: P581010

Luminaire Tested: **HC405D010-HM40525830-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581010  
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: HC405D010-HM40525830-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

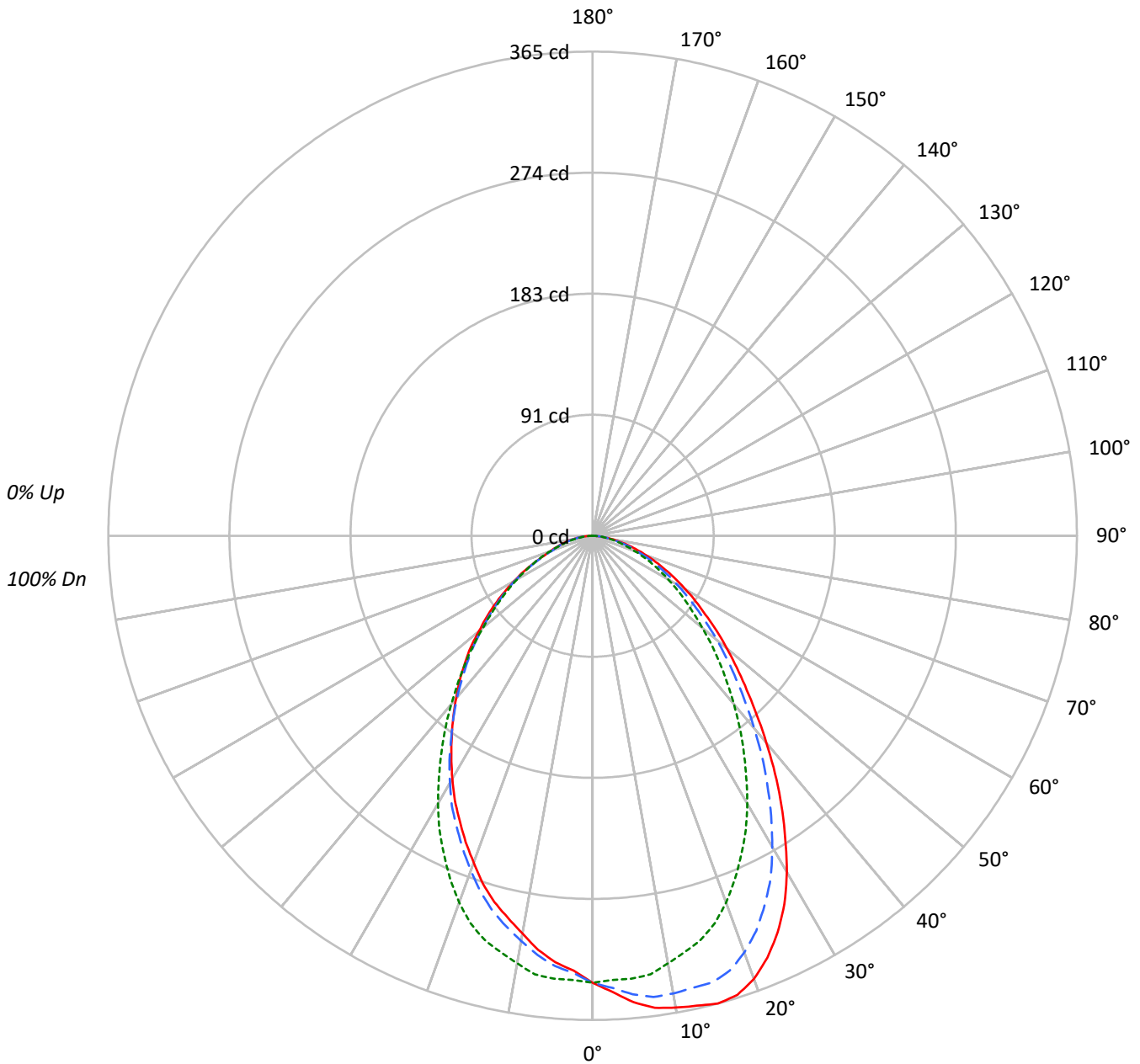
Lumens per Lamp: N/A  
Luminaire Lumens: 653.4 lumens  
Efficiency: N/A  
Efficacy: 108.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	41555	41555	41555
5°	43695	41503	39956
10°	45240	40994	38126
15°	46609	40263	36509
20°	46664	38604	34404
25°	44898	36079	32255
30°	41703	33200	30123
35°	37373	29890	27872
40°	32799	26664	25763
45°	28660	23619	23758
50°	25311	20667	21415
55°	22300	18322	19268
60°	19957	16208	16849
65°	17658	14272	14272
70°	15435	12154	12154
75°	13201	10342	11533
80°	10513	9163	10513
85°	6793	8067	9765



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.9	4.9
10°-20°	89.9	13.8
20°-30°	125.9	19.3
30°-40°	129.7	19.9
40°-50°	110.5	16.9
50°-60°	81.8	12.5
60°-70°	51.4	7.9
70°-80°	25.5	3.9
80°-90°	6.7	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°	247.7	37.9
0°-40°	377.5	57.8
0°-60°	569.8	87.2
0°-90°	653.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	653.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	337	337	337	337	337	
5°	353	347	335	326	323	34
15°	365	349	315	292	286	103
25°	330	307	265	242	237	151
35°	248	230	198	186	185	155
45°	164	153	135	133	136	128
55°	104	96	85	87	90	94
65°	60	54	49	48	49	60
75°	28	25	22	23	24	30
85°	5	5	6	6	7	6
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°	336.9	336.9	336.9	336.9	336.9	336.9	336.9	336.9	336.9
2.5°	344.2	343.0	341.2	338.2	335.2	332.6	329.9	328.7	328.2
5°	352.9	350.3	346.9	341.2	335.2	329.9	325.6	323.5	322.7
7.5°	359.0	356.4	350.7	342.1	333.5	325.6	318.7	315.8	314.8
10°	361.2	358.1	350.3	338.7	327.3	317.9	310.1	306.2	304.4
12.5°	362.9	359.0	349.0	335.2	321.3	309.6	301.5	296.2	295.0
15°	365.0	360.7	348.6	331.8	315.3	301.5	292.4	287.6	285.9
17.5°	362.9	358.1	343.8	324.8	306.2	291.0	281.1	276.8	275.0
20°	355.5	350.3	334.3	313.9	294.1	278.5	268.5	264.2	262.1
22.5°	344.2	338.7	322.2	300.5	280.2	265.1	255.6	251.3	249.9
25°	329.9	324.4	307.0	285.0	265.1	250.4	242.2	238.4	237.0
27.5°	313.1	307.5	290.7	269.0	249.9	236.1	229.6	225.8	224.8
30°	292.8	287.2	270.7	250.8	233.1	220.1	215.0	211.9	211.5
32.5°	270.2	265.6	250.4	232.2	215.4	204.5	200.7	198.5	198.1
35°	248.2	243.0	229.6	213.3	198.5	189.0	185.6	185.1	185.1
37.5°	225.8	220.5	209.7	194.7	182.1	173.4	172.2	172.5	172.5
40°	203.7	199.0	189.4	176.8	165.6	159.1	158.7	159.6	160.0
42.5°	183.0	179.0	170.4	159.6	150.0	144.8	145.3	147.1	148.3
45°	164.3	160.8	153.1	143.6	135.4	131.4	132.8	135.0	136.2
47.5°	147.4	144.5	137.1	128.5	121.6	118.9	120.7	123.3	125.0
50°	131.9	129.3	122.4	113.3	107.7	106.0	108.2	110.7	111.6
52.5°	118.0	115.4	108.2	100.3	96.0	95.1	97.3	99.4	100.8
55°	103.7	101.6	95.6	88.6	85.2	84.8	86.9	88.6	89.6
57.5°	92.2	90.0	84.3	78.3	75.3	74.8	77.0	78.3	78.7
60°	80.9	78.7	73.5	67.9	65.7	65.7	67.1	67.9	68.3
62.5°	70.5	68.3	63.6	58.8	57.1	57.1	57.1	57.5	58.8
65°	60.5	58.8	54.5	50.2	48.9	48.0	48.0	48.0	48.9
67.5°	51.4	49.7	46.3	42.3	41.1	39.8	39.4	40.2	40.2
70°	42.8	41.5	38.0	35.1	33.7	32.5	32.0	33.7	33.7
72.5°	35.1	33.7	31.6	28.5	27.2	26.8	27.7	28.5	28.9
75°	27.7	26.3	24.6	22.9	21.7	22.0	23.4	23.8	24.2
77.5°	20.8	20.3	18.6	17.3	17.3	17.7	18.6	19.4	19.9
80°	14.8	14.3	13.4	12.6	12.9	13.8	14.3	15.1	14.8
82.5°	9.1	9.1	8.6	8.6	9.1	10.0	10.3	10.8	11.2
85°	4.8	4.8	4.8	5.2	5.7	6.0	6.5	6.9	6.9
87.5°	1.2	1.7	1.7	2.2	2.6	2.6	3.1	3.1	3.1
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)