

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: P581006

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581006  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC405D010-HM40525830-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 666.8 lumens  
Efficiency: N/A  
Efficacy: 111.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

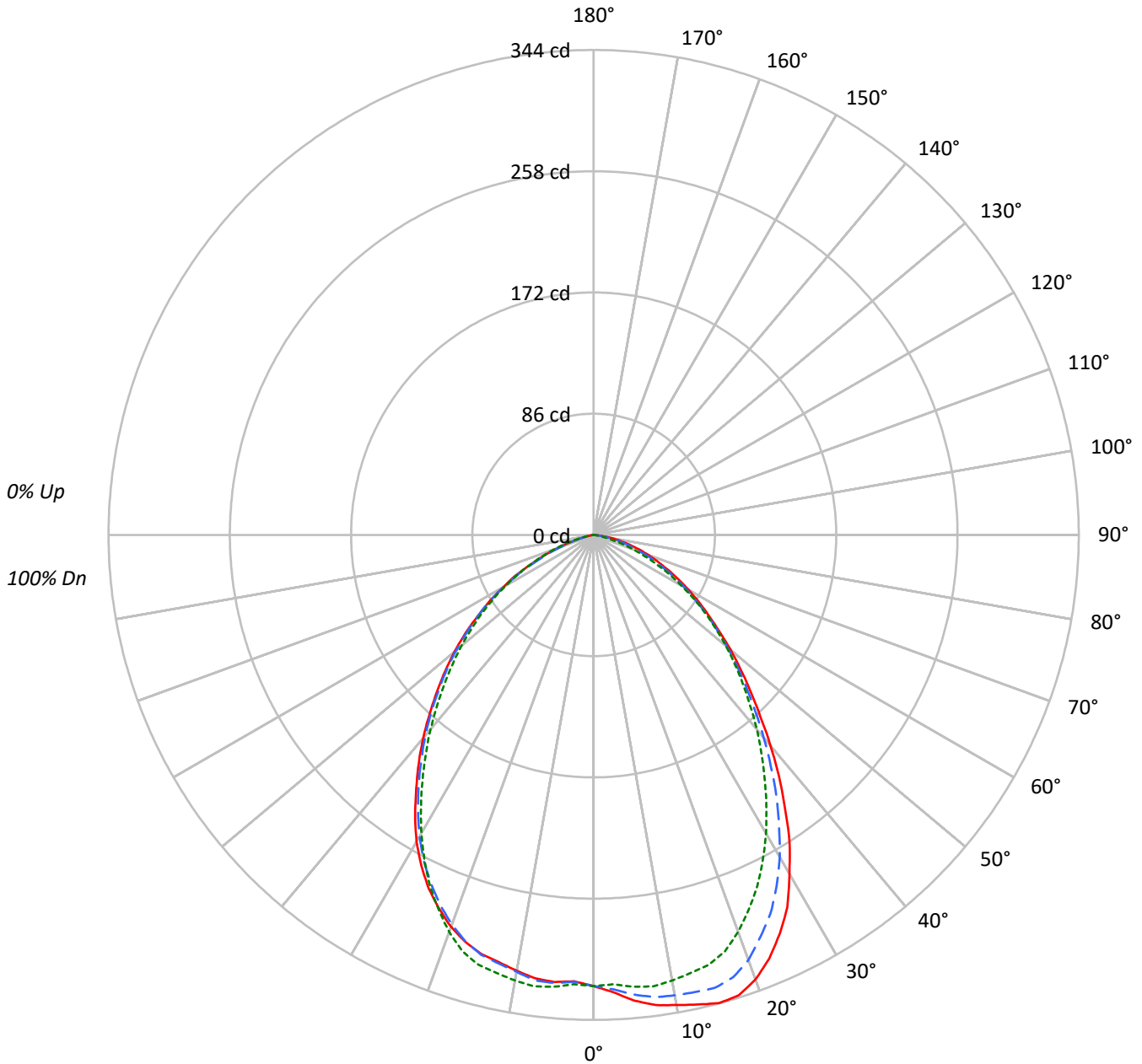
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76					76			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67					67			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58					58			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52					52			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46					46			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41					41			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37					37			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31					31			

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

	0°	90°	180°
0°	39471	39471	39471
5°	41058	39832	39411
10°	42409	40192	39315
15°	43902	40301	39305
20°	44038	39326	38827
25°	42489	37372	37658
30°	39538	34795	35778
35°	35612	31847	33007
40°	31398	28967	30287
45°	27456	26096	27387
50°	24313	23488	24716
55°	21376	20752	21569
60°	19094	17688	18230
65°	16782	14389	14155
70°	14642	10603	9665
75°	12153	6386	5147
80°	9163	2415	1563
85°	4387	708	708



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.9	4.6
10°-20°	90.1	13.5
20°-30°	130.4	19.6
30°-40°	137.6	20.6
40°-50°	119.1	17.9
50°-60°	88.2	13.2
60°-70°	50.9	7.6
70°-80°	17.8	2.7
80°-90°	1.9	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°	251.4	37.7
0°-40°	389.0	58.3
0°-60°	596.3	89.4
0°-90°	666.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	666.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	320	320	320	320	320	
5°	332	327	322	319	318	32
15°	344	333	316	308	308	97
25°	312	297	275	273	277	143
35°	236	226	212	216	219	148
45°	157	153	150	155	157	122
55°	99	97	96	100	100	90
65°	58	54	49	47	48	57
75°	26	22	13	11	11	27
85°	3	2	0	0	0	5
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°	320.0	320.0	320.0	320.0	320.0	320.0	320.0	320.0	320.0
2.5°	324.7	323.8	322.6	320.9	319.0	317.8	317.3	316.9	316.9
5°	331.6	329.9	327.3	323.8	321.7	320.4	319.0	318.3	318.3
7.5°	336.4	334.7	330.7	326.0	323.0	320.4	318.7	317.3	317.3
10°	338.6	336.4	331.6	325.6	320.9	317.3	314.7	313.9	313.9
12.5°	341.2	338.6	332.1	324.3	318.3	313.9	311.3	310.4	310.4
15°	343.8	340.7	332.6	323.5	315.6	310.4	308.3	307.8	307.8
17.5°	342.4	338.6	329.0	318.3	309.6	304.4	302.3	302.3	302.7
20°	335.5	331.6	320.9	308.7	299.6	295.8	294.1	294.9	295.8
22.5°	325.2	320.4	308.7	297.0	287.5	284.1	284.1	285.3	286.7
25°	312.2	307.8	296.6	283.6	274.6	271.9	272.9	275.0	276.7
27.5°	297.5	292.7	281.0	269.0	259.9	258.6	260.7	263.8	264.6
30°	277.6	273.6	263.8	252.1	244.3	243.9	246.9	249.0	251.2
32.5°	258.6	254.2	244.7	233.5	227.9	228.2	231.8	234.4	235.6
35°	236.5	232.7	225.8	216.7	211.5	212.4	216.2	218.8	219.2
37.5°	215.8	213.2	206.2	199.3	195.4	197.1	200.7	203.6	203.6
40°	195.0	192.8	187.6	182.1	179.9	182.1	185.5	188.1	188.1
42.5°	175.1	173.8	169.5	165.6	164.3	167.3	170.4	172.5	172.1
45°	157.4	156.1	153.1	150.0	149.6	152.7	155.3	156.5	157.0
47.5°	141.4	140.5	137.9	135.7	135.7	138.8	141.0	142.2	142.7
50°	126.7	125.9	123.7	121.9	122.4	125.4	127.1	128.4	128.8
52.5°	112.0	111.6	109.9	107.7	109.0	111.1	113.3	114.2	114.6
55°	99.4	99.4	97.3	95.6	96.5	98.6	99.9	100.3	100.3
57.5°	88.2	87.7	85.1	83.4	83.9	86.0	86.9	87.4	87.4
60°	77.4	77.0	74.3	71.7	71.7	73.1	73.5	73.9	73.9
62.5°	67.0	66.6	63.6	61.4	60.5	60.2	60.2	60.9	62.7
65°	57.5	57.1	54.0	50.6	49.3	48.0	46.6	47.6	48.5
67.5°	48.8	48.0	44.9	42.0	38.9	36.8	34.6	35.9	37.6
70°	40.6	39.7	36.3	32.9	29.4	26.0	24.2	26.0	26.8
72.5°	32.9	32.0	28.5	25.1	20.8	17.3	16.9	17.3	17.7
75°	25.5	25.1	21.6	17.7	13.4	10.8	10.8	10.8	10.8
77.5°	19.1	18.2	14.8	11.2	7.8	6.0	5.7	5.7	5.7
80°	12.9	12.1	9.1	6.5	3.4	2.6	2.6	2.2	2.2
82.5°	7.4	6.9	4.8	2.6	1.2	0.9	0.9	0.9	0.9
85°	3.1	2.6	1.7	0.9	0.5	0.5	0.5	0.5	0.5
87.5°	0.5	0.5	0.5	0.0	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



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)