

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: P581009

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581009
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: HC405D010-HM40525830-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 656.4 lumens
Efficiency: N/A
Efficacy: 109.4 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

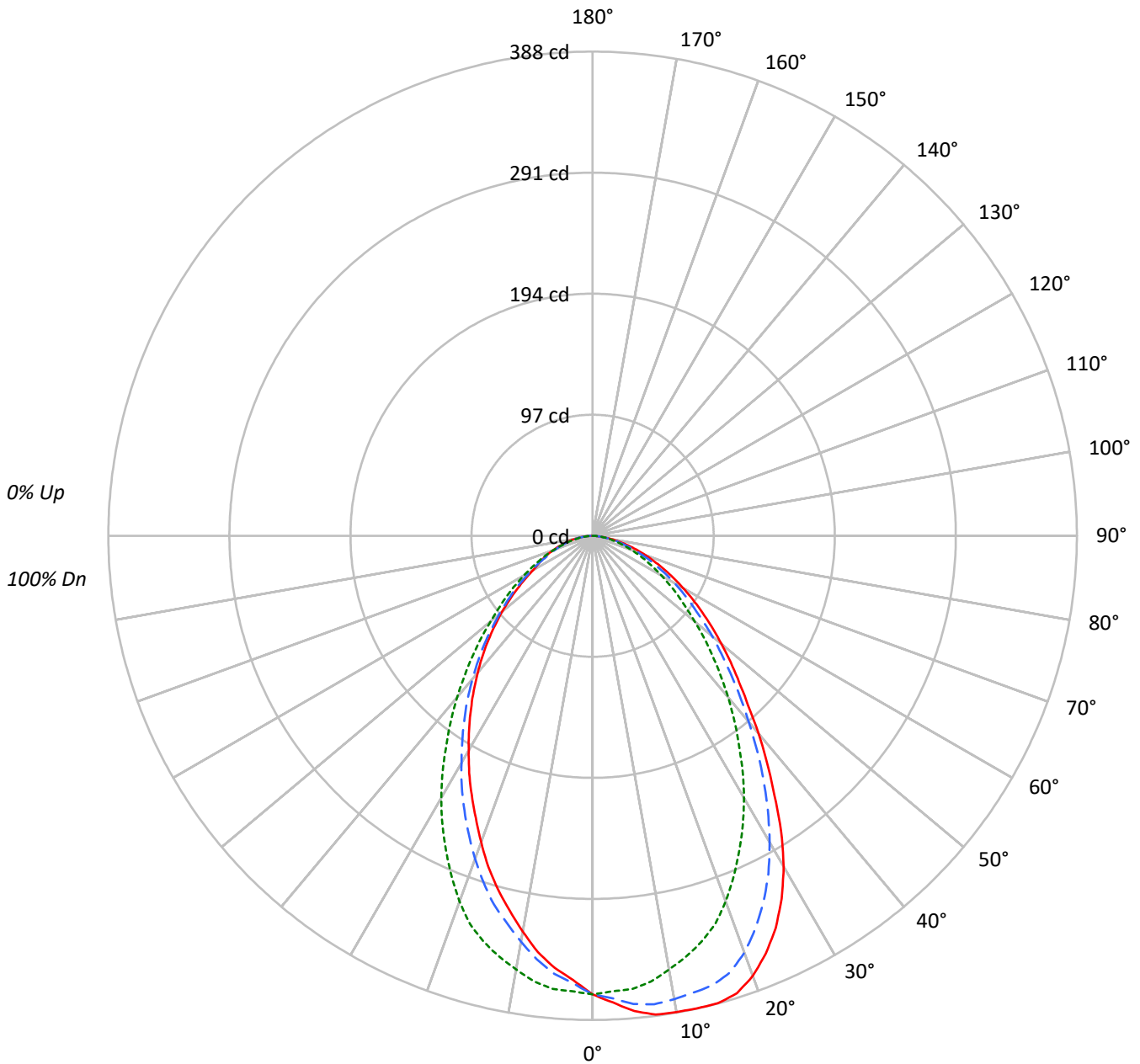
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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				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°	45330	45330	45330
5°	47335	45144	43051
10°	48534	44200	40343
15°	49521	43021	37441
20°	49263	40927	34286
25°	47212	37849	31193
30°	43597	34539	28272
35°	38216	30733	25583
40°	33282	27163	23041
45°	28974	23671	20584
50°	25809	20398	18172
55°	23074	17935	15720
60°	20574	15690	13543
65°	18300	13747	12900
70°	16048	11865	12009
75°	13582	10103	11152
80°	10513	8595	10158
85°	6085	6793	8491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	5.2
10°-20°	95.0	14.5
20°-30°	129.8	19.8
30°-40°	130.4	19.9
40°-50°	107.9	16.4
50°-60°	78.2	11.9
60°-70°	49.5	7.5
70°-80°	25.0	3.8
80°-90°	6.1	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°	259.3	39.5
0°-40°	389.7	59.4
0°-60°	575.7	87.7
0°-90°	656.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	656.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	368	368	368	368	368	
5°	382	377	365	352	348	37
15°	388	373	337	306	293	109
25°	347	324	278	243	229	158
35°	254	239	204	179	170	159
45°	166	156	136	122	118	129
55°	107	98	83	76	73	96
65°	63	56	47	42	44	62
75°	28	25	21	22	23	30
85°	4	4	5	6	6	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°	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5
2.5°	374.4	373.2	371.0	368.4	365.4	362.0	358.9	357.2	356.3
5°	382.3	380.6	376.6	371.0	364.6	358.1	352.4	349.0	347.7
7.5°	387.0	384.4	378.7	370.1	360.2	350.7	342.4	337.8	336.4
10°	387.5	384.4	377.0	365.4	352.9	340.3	330.4	323.5	322.1
12.5°	387.8	384.0	374.9	361.0	345.5	329.9	317.8	309.6	307.5
15°	387.8	384.0	372.7	356.3	336.9	319.2	305.8	296.2	293.2
17.5°	384.4	380.1	366.7	347.7	326.4	306.6	291.0	281.0	278.1
20°	375.3	370.6	355.5	334.7	311.8	291.0	275.5	265.0	261.2
22.5°	362.4	356.7	340.7	318.3	295.3	274.1	259.0	248.2	244.7
25°	346.9	341.2	323.9	301.8	278.1	258.2	243.0	233.1	229.2
27.5°	327.8	321.8	304.9	282.8	260.7	240.8	227.0	217.9	214.1
30°	306.1	299.6	283.6	262.5	242.5	223.6	210.2	202.8	198.5
32.5°	281.0	275.5	261.2	242.2	223.6	205.4	194.2	187.6	184.2
35°	253.8	250.8	238.7	222.2	204.1	189.0	179.0	173.0	169.9
37.5°	229.6	226.5	216.2	202.4	186.4	172.5	164.3	159.1	156.5
40°	206.7	204.1	194.2	182.5	168.7	156.5	149.6	145.7	143.1
42.5°	184.2	183.0	174.7	163.9	151.7	141.4	135.7	132.8	130.6
45°	166.1	164.3	156.5	146.2	135.7	127.1	122.4	120.2	118.0
47.5°	150.0	147.9	139.7	130.6	121.1	113.3	109.0	106.8	105.9
50°	134.5	132.3	125.0	115.9	106.3	100.8	97.3	95.1	94.7
52.5°	120.7	118.5	110.3	101.6	94.3	89.6	86.5	84.3	83.4
55°	107.3	104.6	97.7	89.6	83.4	79.1	76.2	73.9	73.1
57.5°	95.1	92.5	86.5	78.7	73.1	69.2	66.6	64.5	63.6
60°	83.4	81.3	75.7	68.3	63.6	60.2	57.5	55.7	54.9
62.5°	72.6	70.9	65.3	58.8	54.9	51.9	49.7	48.0	48.9
65°	62.7	60.9	55.7	50.2	47.1	44.2	42.3	42.3	44.2
67.5°	53.2	51.4	47.1	42.3	39.8	37.6	36.3	37.6	38.9
70°	44.5	42.8	38.9	35.1	32.9	31.1	31.1	32.5	33.3
72.5°	36.3	34.6	31.6	28.5	26.8	25.5	26.8	27.7	28.5
75°	28.5	27.2	24.6	22.5	21.2	20.8	22.0	22.9	23.4
77.5°	21.2	20.3	18.6	16.9	16.0	16.5	17.7	18.2	18.6
80°	14.8	14.3	12.9	12.1	12.1	12.5	13.4	13.8	14.3
82.5°	9.1	9.1	8.2	7.8	8.2	9.1	9.5	10.0	10.0
85°	4.3	4.8	4.3	4.3	4.8	5.7	5.7	6.0	6.0
87.5°	1.2	1.2	1.7	1.7	2.2	2.2	2.2	2.2	2.6
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)