

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: P581043

Luminaire Tested: **HC405D010-HM40525840-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581043  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC405D010-HM40525840-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 706.5 lumens  
Efficiency: N/A  
Efficacy: 117.8 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

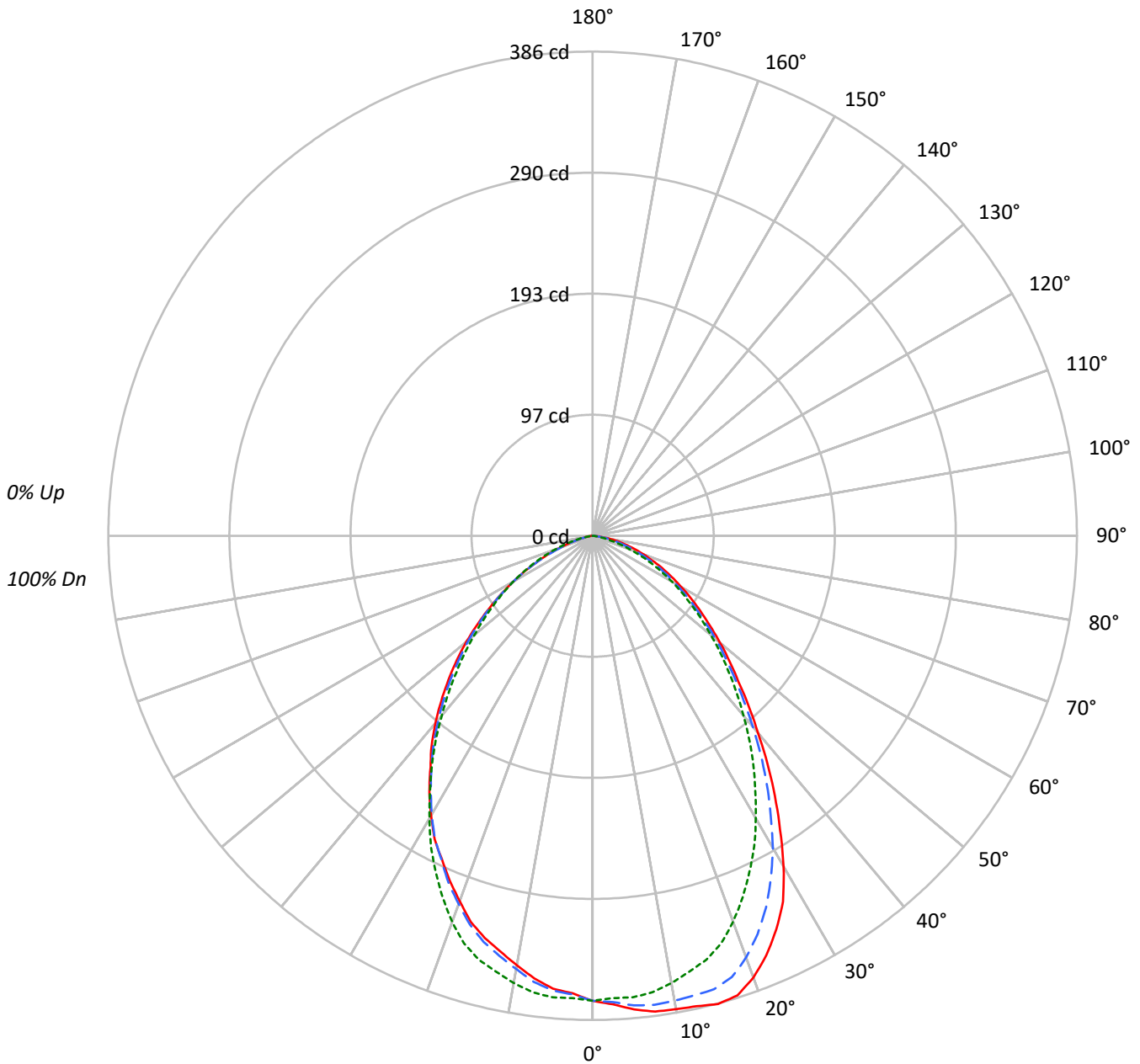
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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				100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59				59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47				47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	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	41	37	47	41	37	46	41	37	35				35
10	58	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°	45724	45724	45724
5°	46927	45726	44871
10°	47983	45340	43549
15°	49342	44681	42395
20°	49197	42975	40678
25°	47130	40244	38720
30°	43355	37045	36661
35°	38126	33639	33910
40°	32992	30094	31366
45°	28660	26741	28346
50°	25445	23583	25176
55°	22580	20687	21569
60°	20105	17959	17959
65°	17891	14914	13980
70°	15435	11288	9954
75°	12915	7482	6148
80°	9802	3623	3339
85°	5095	1274	1274



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.1	5.0
10°-20°	99.5	14.1
20°-30°	140.4	19.9
30°-40°	145.0	20.5
40°-50°	122.9	17.4
50°-60°	89.4	12.7
60°-70°	52.3	7.4
70°-80°	19.4	2.7
80°-90°	2.6	0.4
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°	275.0	38.9
0°-40°	420.0	59.4
0°-60°	632.3	89.5
0°-90°	706.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	706.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	371	371	371	371	371	
5°	379	376	369	364	362	36
15°	386	374	350	335	332	109
25°	346	327	296	285	284	158
35°	253	242	223	224	225	158
45°	164	160	153	159	162	128
55°	105	100	96	99	100	94
65°	61	56	51	48	48	61
75°	27	23	16	12	13	29
85°	4	2	1	1	1	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°	370.7	370.7	370.7	370.7	370.7	370.7	370.7	370.7	370.7
2.5°	373.9	373.0	372.1	370.7	368.9	367.5	366.0	365.1	365.1
5°	379.0	377.6	375.8	372.5	369.3	366.5	363.8	362.4	362.4
7.5°	382.6	380.8	377.2	372.5	366.9	362.9	358.7	356.8	355.9
10°	383.1	381.2	376.3	369.3	362.0	355.5	350.8	348.1	347.7
12.5°	384.1	381.7	375.2	365.6	355.9	348.1	343.1	340.3	339.4
15°	386.4	383.1	374.3	362.0	349.9	340.7	335.3	332.9	332.0
17.5°	384.1	379.4	368.9	354.1	340.7	330.6	325.1	322.8	322.8
20°	374.8	370.2	357.8	341.6	327.4	317.7	312.2	310.9	309.9
22.5°	362.0	356.8	343.6	326.4	312.2	303.5	299.8	297.9	297.5
25°	346.3	341.2	327.0	309.4	295.7	288.3	285.0	285.0	284.5
27.5°	328.8	322.3	307.6	292.4	279.1	273.5	272.2	272.2	272.6
30°	304.4	299.8	287.4	272.6	260.1	256.5	256.5	257.4	257.4
32.5°	278.1	274.9	263.9	250.9	241.3	239.0	239.9	241.8	242.2
35°	253.2	249.6	242.2	230.7	223.4	222.5	223.8	225.2	225.2
37.5°	228.8	225.2	220.1	210.9	205.3	205.9	207.7	209.5	210.9
40°	204.9	202.1	198.5	191.1	186.9	188.8	191.1	193.0	194.8
42.5°	183.8	180.9	178.2	172.6	169.9	172.2	175.0	176.8	178.6
45°	164.3	162.5	159.8	155.2	153.3	155.6	158.9	160.7	162.5
47.5°	147.8	146.9	143.2	139.0	138.1	140.4	143.2	145.5	146.9
50°	132.6	131.2	128.0	123.8	122.9	126.7	128.5	129.8	131.2
52.5°	117.9	116.5	112.8	109.2	109.2	111.9	113.3	113.7	115.1
55°	105.0	103.6	99.9	97.2	96.2	98.5	99.4	99.4	100.3
57.5°	93.1	91.6	88.0	84.7	84.2	85.7	85.7	85.7	86.1
60°	81.5	80.1	76.4	73.7	72.8	73.2	72.8	72.3	72.8
62.5°	70.9	69.6	65.8	62.7	61.7	61.7	60.3	59.8	60.3
65°	61.3	58.9	56.2	53.0	51.1	49.7	47.9	47.9	47.9
67.5°	51.5	49.7	46.5	43.2	41.0	38.7	35.9	36.9	37.3
70°	42.8	41.4	37.8	34.5	31.3	28.6	26.2	27.1	27.6
72.5°	35.0	33.1	30.0	26.2	23.5	19.7	18.4	19.3	19.3
75°	27.1	25.3	22.6	18.8	15.7	12.5	12.5	12.9	12.9
77.5°	20.3	18.4	15.7	12.5	9.6	7.4	7.8	7.8	7.8
80°	13.8	12.5	10.1	7.4	5.1	4.2	4.2	4.2	4.7
82.5°	7.8	6.9	5.6	3.6	2.3	2.3	2.3	2.3	2.3
85°	3.6	2.7	2.3	1.4	0.9	0.9	0.9	0.9	0.9
87.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)