

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: P579770

Luminaire Tested: **HC410D010-HM40525927-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579770  
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: HC410D010-HM40525927-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 858.3 lumens  
Efficiency: N/A  
Efficacy: 86.7 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

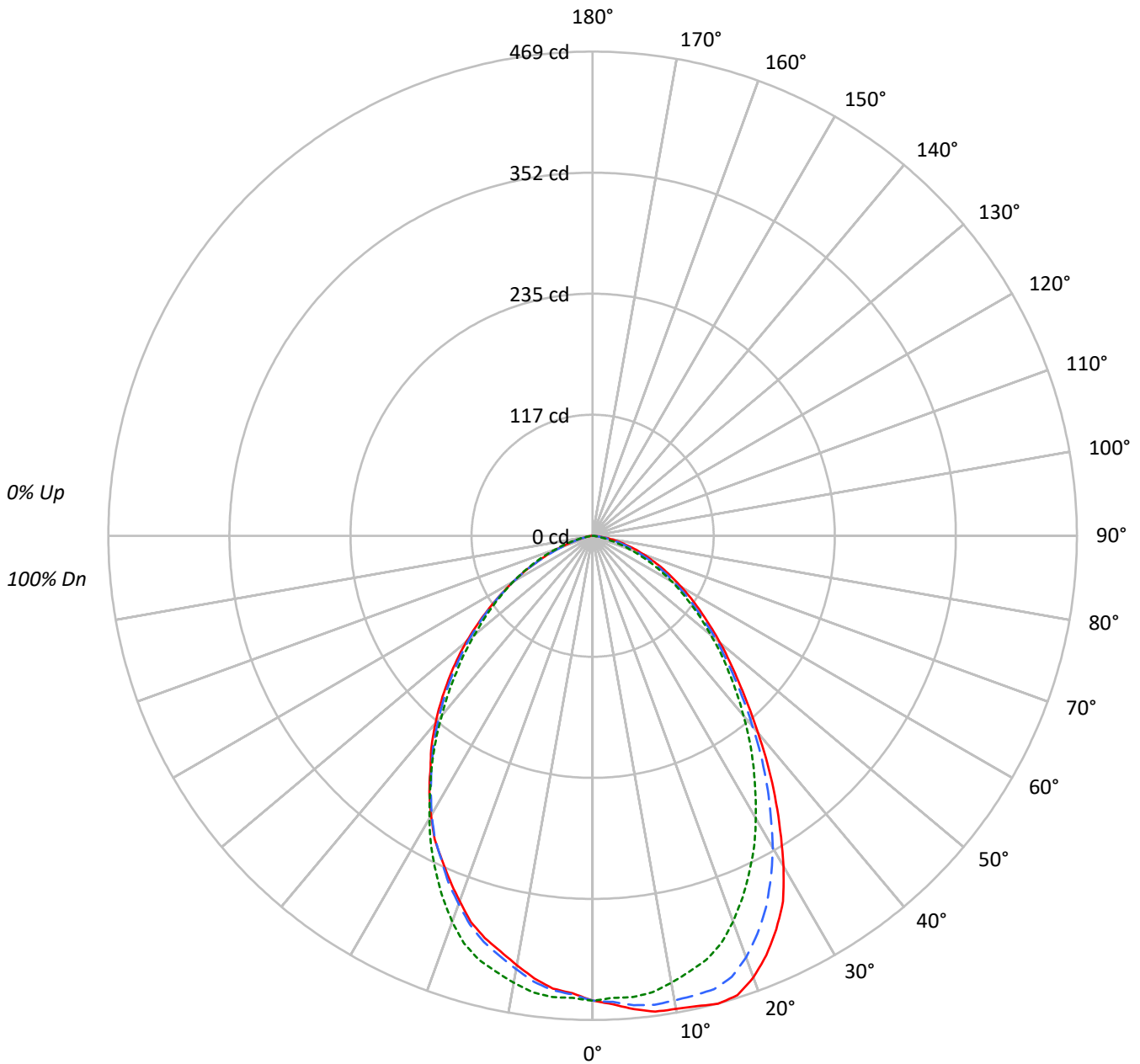
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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°	55543	55543	55543
5°	57005	55544	54517
10°	58291	55072	52892
15°	59928	54297	51500
20°	59763	52203	49420
25°	57256	48886	47049
30°	52655	45007	44537
35°	46333	40852	41198
40°	40077	36567	38096
45°	34835	32498	34434
50°	30914	28649	30588
55°	27440	25139	26236
60°	24422	21808	21808
65°	21714	18125	16986
70°	18753	13704	12117
75°	15727	9055	7482
80°	11862	4333	3978
85°	6227	1557	1557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	5.0
10°-20°	120.9	14.1
20°-30°	170.5	19.9
30°-40°	176.1	20.5
40°-50°	149.3	17.4
50°-60°	108.6	12.7
60°-70°	63.5	7.4
70°-80°	23.6	2.7
80°-90°	3.1	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°	334.1	38.9
0°-40°	510.2	59.4
0°-60°	768.2	89.5
0°-90°	858.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	858.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	450	450	450	450	450	
5°	460	456	449	442	440	44
15°	469	455	425	407	403	132
25°	421	397	359	346	346	192
35°	308	294	271	272	274	192
45°	200	194	186	193	197	155
55°	128	121	117	121	122	115
65°	74	68	62	58	58	74
75°	33	27	19	15	16	35
85°	4	3	1	1	1	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°	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3
2.5°	454.2	453.2	452.0	450.3	448.0	446.4	444.7	443.6	443.6
5°	460.4	458.7	456.5	452.6	448.6	445.3	441.9	440.3	440.3
7.5°	464.9	462.6	458.2	452.6	445.9	440.9	435.7	433.6	432.4
10°	465.4	463.2	457.0	448.6	439.7	431.9	426.3	422.9	422.3
12.5°	466.6	463.7	455.9	444.2	432.4	422.9	416.7	413.4	412.3
15°	469.3	465.4	454.7	439.7	425.2	414.0	407.3	404.4	403.3
17.5°	466.6	460.9	448.0	430.2	414.0	401.6	394.9	392.2	392.2
20°	455.3	449.7	434.6	415.0	397.7	386.0	379.3	377.6	376.5
22.5°	439.7	433.6	417.3	396.6	379.3	368.6	364.2	361.9	361.3
25°	420.7	414.5	397.2	375.9	359.2	350.2	346.3	346.3	345.7
27.5°	399.4	391.6	373.7	355.2	339.0	332.3	330.6	330.6	331.2
30°	369.7	364.2	349.0	331.2	316.0	311.6	311.6	312.7	312.7
32.5°	337.9	334.0	320.6	304.9	293.1	290.3	291.4	293.7	294.3
35°	307.7	303.2	294.3	280.3	271.3	270.2	271.9	273.6	273.6
37.5°	278.0	273.6	267.4	256.2	249.4	250.0	252.3	254.6	256.2
40°	248.9	245.6	241.1	232.2	227.1	229.3	232.2	234.4	236.6
42.5°	223.2	219.9	216.4	209.7	206.4	209.2	212.6	214.9	217.0
45°	199.7	197.4	194.1	188.6	186.3	189.0	193.0	195.3	197.4
47.5°	179.6	178.4	174.0	169.0	167.9	170.6	174.0	176.7	178.4
50°	161.1	159.4	155.6	150.4	149.3	153.9	156.0	157.7	159.4
52.5°	143.2	141.6	137.0	132.6	132.6	135.9	137.6	138.2	139.9
55°	127.6	125.9	121.4	118.0	116.9	119.7	120.9	120.9	122.0
57.5°	113.0	111.3	106.9	102.9	102.4	104.0	104.0	104.0	104.6
60°	99.0	97.3	92.9	89.6	88.4	89.0	88.4	87.9	88.4
62.5°	86.1	84.4	80.0	76.1	75.0	75.0	73.3	72.7	73.3
65°	74.4	71.6	68.3	64.3	62.1	60.4	58.2	58.2	58.2
67.5°	62.7	60.4	56.4	52.6	49.7	47.0	43.6	44.7	45.3
70°	52.0	50.3	45.9	42.0	38.0	34.7	31.9	33.0	33.6
72.5°	42.6	40.3	36.4	31.9	28.6	24.0	22.4	23.4	23.4
75°	33.0	30.7	27.4	23.0	19.0	15.1	15.1	15.7	15.7
77.5°	24.6	22.4	19.0	15.1	11.7	9.0	9.6	9.6	9.6
80°	16.7	15.1	12.3	9.0	6.1	5.0	5.0	5.0	5.6
82.5°	9.6	8.4	6.7	4.4	2.8	2.8	2.8	2.8	2.8
85°	4.4	3.3	2.8	1.7	1.1	1.1	1.1	1.1	1.1
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)