

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: P579806

Luminaire Tested: **HC410D010-HM40525935-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579806
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-HM40525935-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1005.9 lumens
Efficiency: N/A
Efficacy: 101.6 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

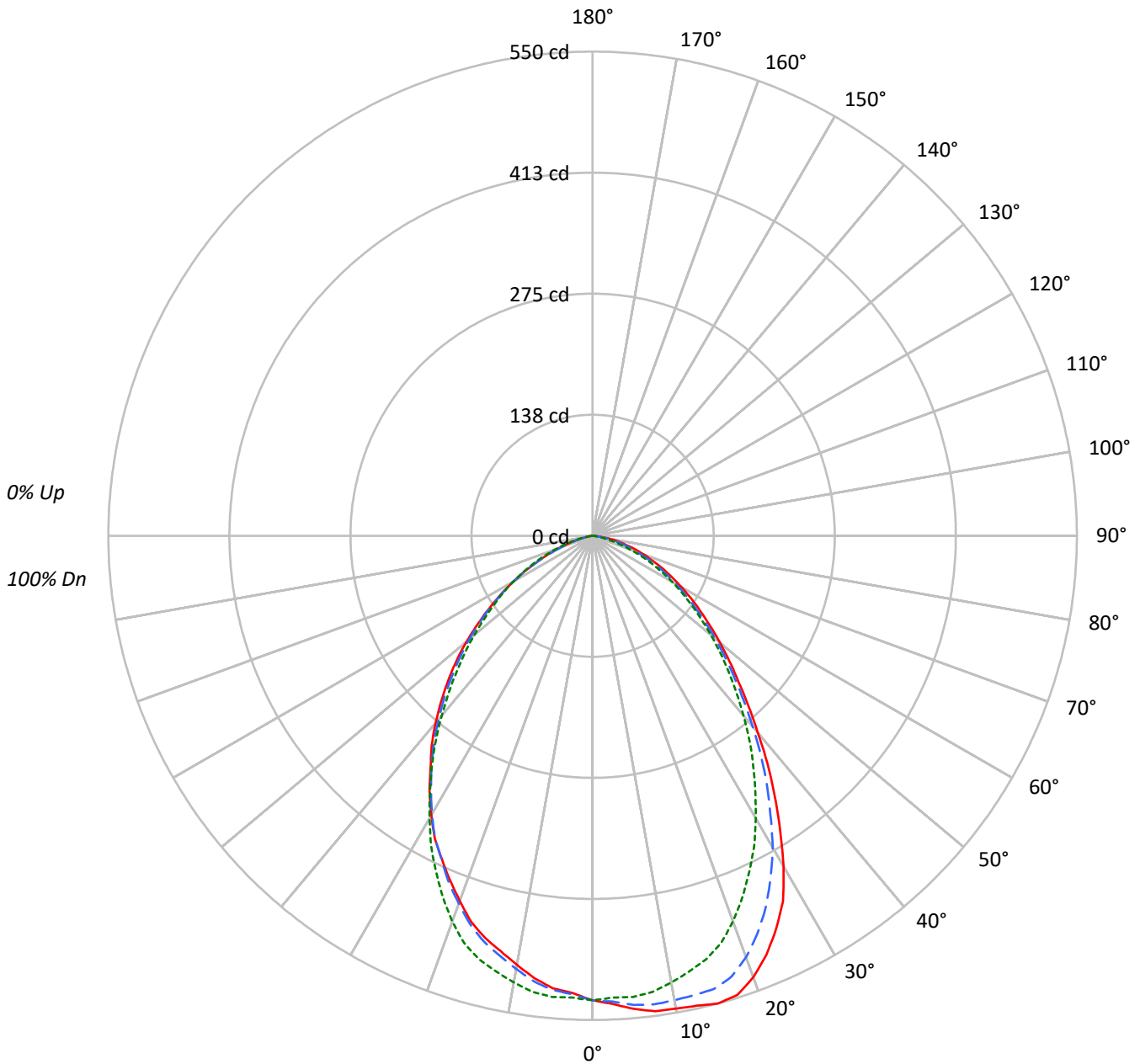
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	65089	65089	65089
5°	66799	65103	63889
10°	68310	64541	61985
15°	70233	63619	60362
20°	70041	61181	57913
25°	67096	57270	55133
30°	61728	52755	52185
35°	54283	47884	48275
40°	46985	42863	44650
45°	40836	38080	40382
50°	36229	33581	35865
55°	32128	29461	30730
60°	28641	25557	25557
65°	25450	21218	19905
70°	21999	16084	14209
75°	18443	10628	8721
80°	13993	5114	4688
85°	7359	1981	1981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	5.0
10°-20°	141.7	14.1
20°-30°	199.8	19.9
30°-40°	206.4	20.5
40°-50°	175.0	17.4
50°-60°	127.3	12.7
60°-70°	74.4	7.4
70°-80°	27.7	2.7
80°-90°	3.7	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°	391.5	38.9
0°-40°	597.9	59.4
0°-60°	900.2	89.5
0°-90°	1005.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1005.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	528	528	528	528	528	
5°	540	535	526	518	516	52
15°	550	533	498	477	473	155
25°	493	465	421	406	405	225
35°	360	345	318	319	321	225
45°	234	228	218	226	232	182
55°	149	142	137	142	143	134
65°	87	80	73	68	68	87
75°	39	32	22	18	18	42
85°	5	3	1	1	1	7
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°	527.7	527.7	527.7	527.7	527.7	527.7	527.7	527.7	527.7
2.5°	532.4	531.0	529.7	527.7	525.1	523.1	521.2	519.8	519.8
5°	539.5	537.6	535.0	530.3	525.8	521.9	517.9	516.0	516.0
7.5°	544.8	542.1	536.9	530.3	522.5	516.7	510.7	508.1	506.8
10°	545.4	542.8	535.7	525.8	515.3	506.1	499.6	495.6	494.9
12.5°	546.8	543.5	534.3	520.5	506.8	495.6	488.4	484.4	483.2
15°	550.0	545.4	533.0	515.3	498.2	485.1	477.3	474.0	472.7
17.5°	546.8	540.2	525.1	504.1	485.1	470.7	462.8	459.5	459.5
20°	533.6	527.1	509.4	486.5	466.1	452.4	444.5	442.6	441.2
22.5°	515.3	508.1	489.1	464.8	444.5	432.0	426.7	424.1	423.4
25°	493.0	485.8	465.4	440.5	420.8	410.4	405.8	405.8	405.1
27.5°	468.1	459.0	437.9	416.3	397.3	389.4	387.5	387.5	388.1
30°	433.4	426.7	409.1	388.1	370.4	365.2	365.2	366.4	366.4
32.5°	396.0	391.4	375.7	357.3	343.6	340.3	341.5	344.1	344.8
35°	360.5	355.3	344.8	328.4	318.0	316.6	318.6	320.6	320.6
37.5°	325.8	320.6	313.4	300.2	292.4	293.0	295.7	298.3	300.2
40°	291.8	287.8	282.6	272.1	266.2	268.8	272.1	274.7	277.3
42.5°	261.6	257.6	253.7	245.8	241.9	245.2	249.1	251.7	254.3
45°	234.1	231.5	227.5	220.9	218.3	221.6	226.1	228.9	231.5
47.5°	210.4	209.2	203.9	198.0	196.6	199.9	203.9	207.1	209.2
50°	188.8	186.9	182.3	176.4	175.0	180.3	182.9	184.9	186.9
52.5°	167.9	165.8	160.6	155.3	155.3	159.3	161.3	161.9	163.9
55°	149.4	147.5	142.2	138.4	137.0	140.3	141.6	141.6	142.9
57.5°	132.5	130.4	125.2	120.6	119.9	122.0	122.0	122.0	122.6
60°	116.1	114.0	108.8	104.9	103.6	104.2	103.6	102.9	103.6
62.5°	100.9	99.0	93.8	89.1	87.9	87.9	85.9	85.2	85.9
65°	87.2	83.9	80.0	75.3	72.7	70.8	68.2	68.2	68.2
67.5°	73.4	70.8	66.2	61.7	58.4	55.1	51.1	52.5	53.1
70°	61.0	58.9	53.7	49.2	44.6	40.6	37.3	38.7	39.4
72.5°	49.8	47.2	42.6	37.3	33.5	28.2	26.2	27.5	27.5
75°	38.7	36.1	32.1	26.9	22.3	17.8	17.8	18.3	18.3
77.5°	28.8	26.2	22.3	17.8	13.8	10.5	11.2	11.2	11.2
80°	19.7	17.8	14.5	10.5	7.2	5.9	5.9	5.9	6.6
82.5°	11.2	9.8	7.9	5.2	3.3	3.3	3.3	3.3	3.3
85°	5.2	4.0	3.3	1.9	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)