

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: P592617

Luminaire Tested: **HC410D010-HM40525950-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC410D010-HM40525950-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 824.9 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

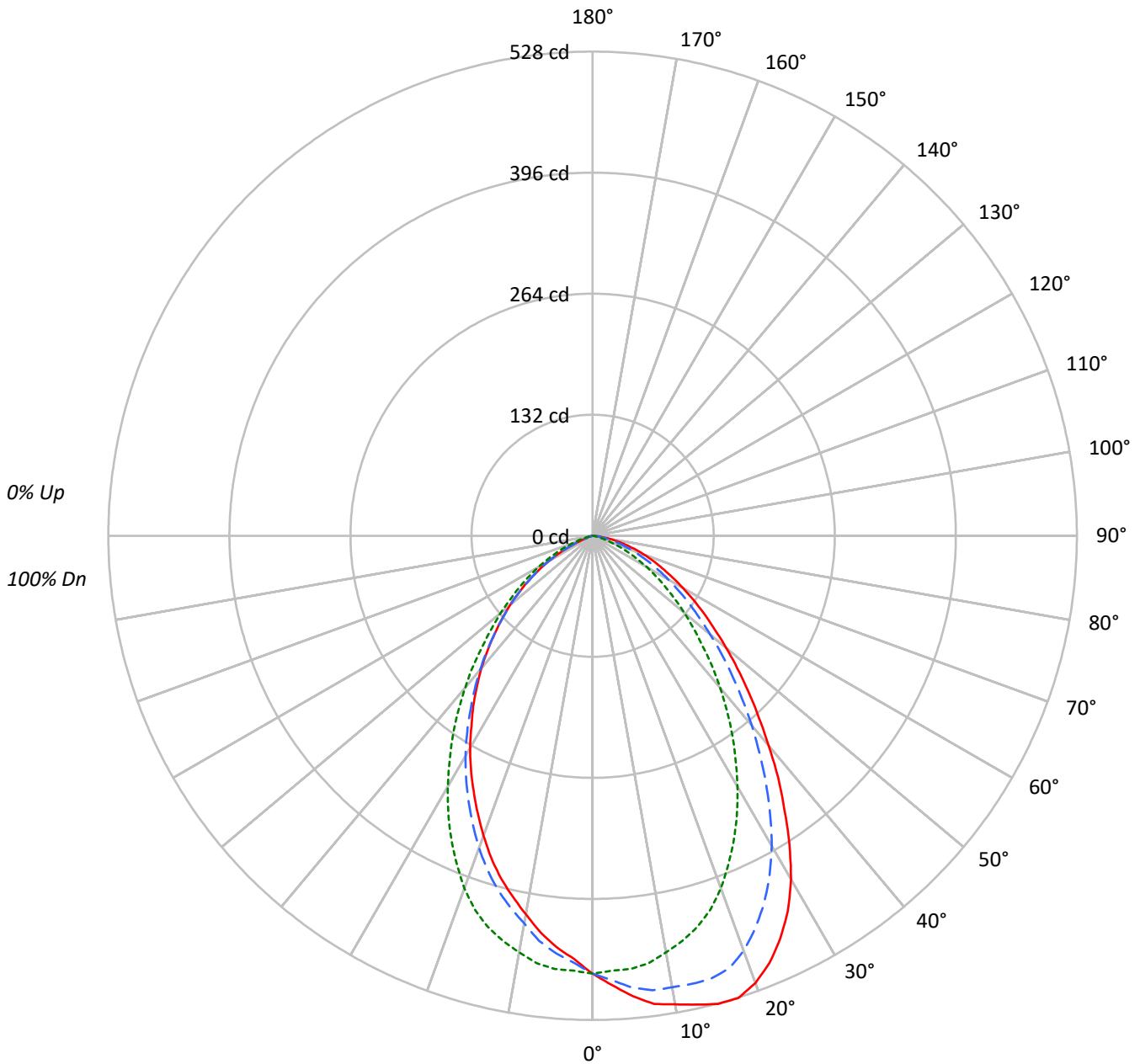
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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																			
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	58898	58898	58898
5°	62404	58702	55767
10°	64991	57765	52492
15°	67488	56378	49355
20°	68112	53673	45653
25°	65912	49635	41782
30°	61628	44993	38028
35°	54916	39993	34166
40°	48015	34780	30400
45°	41830	29497	26305
50°	36498	25023	22566
55°	31977	20752	18257
60°	27999	16750	13420
65°	24370	12492	7530
70°	21314	8078	2452
75°	17442	4241	667
80°	12999	1918	497
85°	7784	991	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	5.5
10°-20°	126.1	15.3
20°-30°	174.4	21.1
30°-40°	175.4	21.3
40°-50°	141.5	17.2
50°-60°	95.7	11.6
60°-70°	48.7	5.9
70°-80°	15.6	1.9
80°-90°	2.4	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°	345.6	41.9
0°-40°	521.0	63.2
0°-60°	758.2	91.9
0°-90°	824.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	824.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	478	478	478	478	478	
5°	504	495	474	457	450	49
15°	528	500	442	399	386	149
25°	484	442	365	320	307	222
35°	365	330	266	232	227	228
45°	240	215	169	151	151	186
55°	149	128	96	84	85	134
65°	84	68	43	28	26	84
75°	37	26	9	2	1	40
85°	6	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°	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5
2.5°	490.5	487.7	485.0	480.2	474.8	469.4	466.0	463.3	461.9
5°	504.0	500.6	494.6	484.3	474.1	464.6	457.1	452.4	450.4
7.5°	514.9	510.2	499.9	485.7	470.1	455.1	445.6	438.8	436.1
10°	518.9	513.6	499.9	480.9	461.2	442.9	429.3	422.5	419.1
12.5°	523.7	517.6	500.6	476.8	452.4	430.6	415.0	406.3	402.9
15°	528.5	520.3	499.9	470.8	441.5	416.4	399.4	390.6	386.5
17.5°	528.5	518.9	494.6	460.5	427.3	400.8	381.8	371.6	368.1
20°	518.9	508.1	481.6	444.3	408.9	380.4	362.1	351.9	347.8
22.5°	504.0	491.8	463.3	424.6	387.1	359.4	340.9	331.5	327.4
25°	484.3	472.2	442.2	402.2	364.7	337.0	319.9	311.1	307.0
27.5°	461.2	447.7	417.8	377.7	340.9	314.5	298.8	290.8	287.3
30°	432.7	419.8	390.6	351.2	315.9	291.4	277.1	269.7	267.0
32.5°	399.4	388.5	360.1	323.3	290.1	267.7	254.7	248.7	245.9
35°	364.7	354.6	329.5	295.5	265.6	244.6	232.3	228.3	226.9
37.5°	332.2	323.3	298.8	267.7	240.5	222.1	211.2	208.6	207.2
40°	298.2	292.1	269.7	241.1	216.0	199.7	190.8	188.8	188.8
42.5°	267.7	260.8	241.1	215.3	192.9	176.6	170.5	168.4	169.1
45°	239.8	232.9	214.6	190.8	169.1	155.6	150.8	150.8	150.8
47.5°	213.9	207.9	190.8	166.4	148.7	137.9	133.1	133.1	133.8
50°	190.2	186.2	167.1	146.0	130.4	120.3	116.9	116.2	117.6
52.5°	167.7	163.1	146.0	127.0	112.1	103.9	100.5	99.8	100.5
55°	148.7	143.3	128.4	110.0	96.5	88.3	84.2	83.5	84.9
57.5°	130.4	126.3	110.7	94.5	81.5	73.4	70.0	68.6	69.3
60°	113.5	109.4	95.1	79.4	67.9	59.7	55.0	53.7	54.4
62.5°	97.9	94.5	80.8	65.9	54.4	46.9	42.1	38.7	40.1
65°	83.5	80.1	67.9	53.0	42.8	34.6	27.9	25.1	25.8
67.5°	71.4	67.3	55.6	42.1	32.0	23.1	15.6	14.2	14.2
70°	59.1	55.0	44.8	32.7	22.4	12.2	6.8	6.8	6.8
72.5°	47.6	44.2	34.6	24.5	14.2	5.5	2.7	2.7	2.7
75°	36.6	33.9	25.8	17.0	8.9	2.7	2.0	1.4	1.4
77.5°	27.2	24.5	18.3	11.5	5.5	1.4	1.4	1.4	1.4
80°	18.3	16.3	12.2	6.8	2.7	0.7	0.7	0.7	0.7
82.5°	10.9	9.6	6.8	3.4	1.4	0.7	0.7	0.7	0.7
85°	5.5	4.1	2.7	1.4	0.7	0.7	0.7	0.7	0.7
87.5°	1.4	0.7	0.7	0.7	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)