

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: P579807

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579807
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-HM40525935-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 796.1 lumens
Efficiency: N/A
Efficacy: 80.4 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

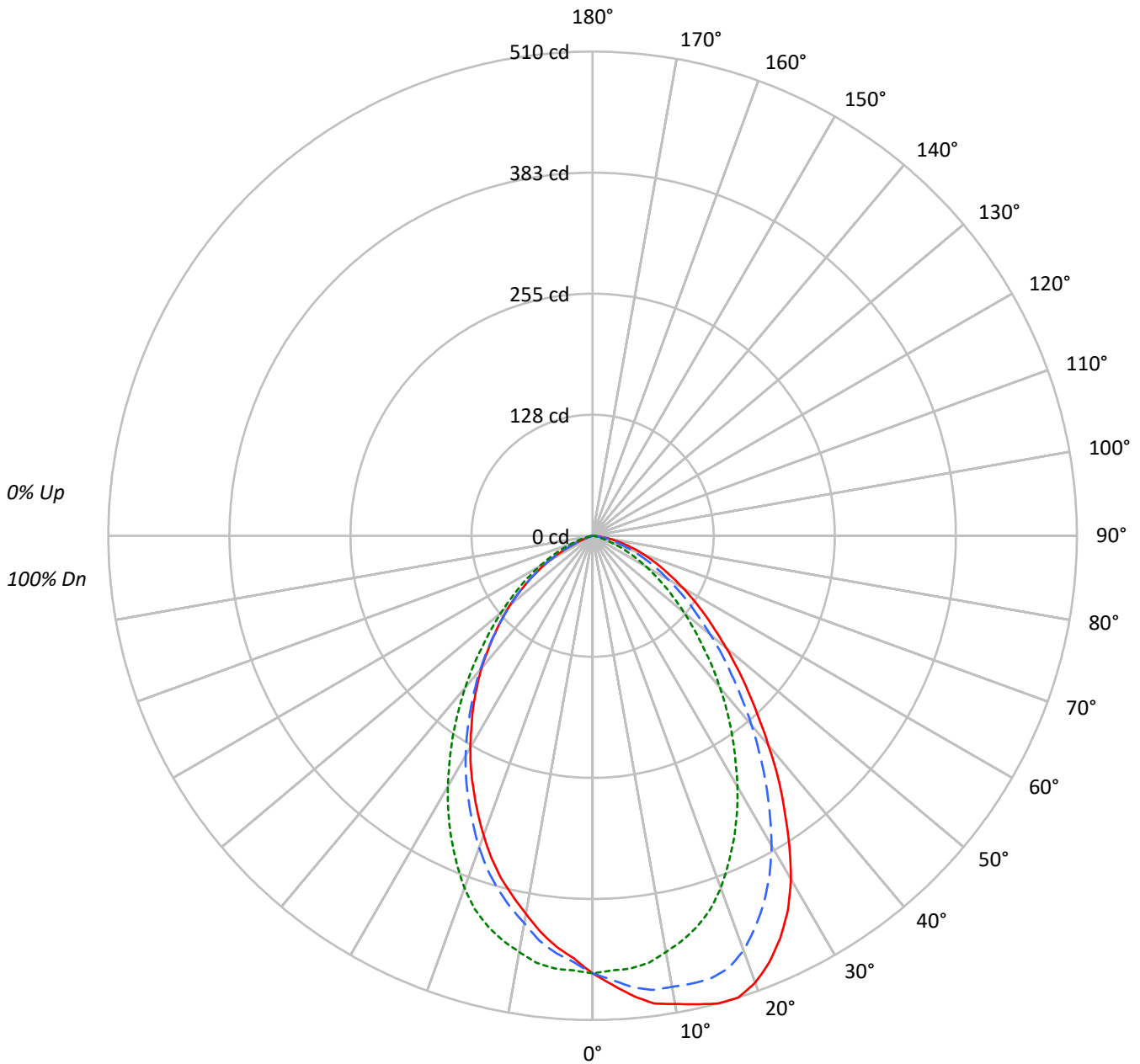
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	56850	56850	56850
5°	60224	56659	53811
10°	62724	55748	50650
15°	65138	54412	47631
20°	65736	51809	44051
25°	63612	47906	40325
30°	59478	43426	36689
35°	53003	38593	32976
40°	46340	33572	29337
45°	40382	28468	25398
50°	35231	24159	21780
55°	30881	20021	17612
60°	27013	16158	12951
65°	23553	12054	7267
70°	20556	7790	2380
75°	16871	4051	667
80°	12644	1847	497
85°	7359	991	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	5.5
10°-20°	121.7	15.3
20°-30°	168.3	21.1
30°-40°	169.2	21.3
40°-50°	136.6	17.2
50°-60°	92.4	11.6
60°-70°	47.0	5.9
70°-80°	15.1	1.9
80°-90°	2.3	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°	333.5	41.9
0°-40°	502.8	63.2
0°-60°	731.7	91.9
0°-90°	796.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	796.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	461	461	461	461	461	
5°	486	477	458	441	435	47
15°	510	482	426	385	373	144
25°	467	427	352	309	296	214
35°	352	318	256	224	219	220
45°	232	207	163	146	146	179
55°	144	124	93	81	82	129
65°	81	66	41	27	25	81
75°	35	25	8	2	1	38
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°	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9	460.9
2.5°	473.3	470.7	468.1	463.5	458.3	453.0	449.7	447.1	445.8
5°	486.4	483.2	477.3	467.4	457.6	448.4	441.2	436.7	434.6
7.5°	497.0	492.3	482.5	468.7	453.6	439.3	430.1	423.4	420.8
10°	500.8	495.6	482.5	464.2	445.1	427.4	414.3	407.7	404.4
12.5°	505.4	499.6	483.2	460.2	436.7	415.6	400.6	392.0	388.7
15°	510.1	502.2	482.5	454.3	426.1	401.8	385.4	376.9	373.0
17.5°	510.1	500.8	477.3	444.5	412.3	386.8	368.4	358.6	355.3
20°	500.8	490.4	464.8	428.7	394.7	367.1	349.4	339.6	335.6
22.5°	486.4	474.7	447.1	409.7	373.7	346.7	329.1	319.9	316.0
25°	467.4	455.7	426.7	388.1	352.0	325.1	308.7	300.2	296.3
27.5°	445.1	432.0	403.2	364.5	329.1	303.5	288.5	280.6	277.3
30°	417.6	405.1	376.9	338.9	304.9	281.2	267.4	260.3	257.6
32.5°	385.4	375.0	347.4	312.0	279.9	258.3	245.8	239.9	237.3
35°	352.0	342.2	318.0	285.2	256.3	236.0	224.2	220.3	219.0
37.5°	320.6	312.0	288.5	258.3	232.0	214.4	203.9	201.3	199.9
40°	287.8	281.9	260.3	232.7	208.5	192.8	184.2	182.2	182.2
42.5°	258.3	251.7	232.7	207.8	186.2	170.5	164.6	162.6	163.2
45°	231.5	224.9	207.1	184.2	163.2	150.1	145.6	145.6	145.6
47.5°	206.5	200.6	184.2	160.6	143.6	133.0	128.5	128.5	129.2
50°	183.6	179.6	161.3	141.0	125.9	116.1	112.8	112.1	113.5
52.5°	161.9	157.4	141.0	122.6	108.2	100.3	97.1	96.4	97.1
55°	143.6	138.4	123.9	106.2	93.1	85.2	81.3	80.7	81.9
57.5°	125.9	121.9	106.9	91.2	78.6	70.8	67.5	66.2	66.9
60°	109.5	105.5	91.7	76.7	65.5	57.7	53.1	51.8	52.5
62.5°	94.5	91.2	78.1	63.6	52.5	45.2	40.6	37.3	38.7
65°	80.7	77.4	65.5	51.1	41.3	33.5	26.9	24.2	24.9
67.5°	68.8	64.9	53.7	40.6	30.8	22.3	15.0	13.8	13.8
70°	57.0	53.1	43.2	31.5	21.6	11.8	6.6	6.6	6.6
72.5°	45.9	42.6	33.5	23.6	13.8	5.2	2.6	2.6	2.6
75°	35.4	32.8	24.9	16.4	8.5	2.6	1.9	1.4	1.4
77.5°	26.2	23.6	17.8	11.2	5.2	1.4	1.4	1.4	1.4
80°	17.8	15.7	11.8	6.6	2.6	0.7	0.7	0.7	0.7
82.5°	10.5	9.2	6.6	3.3	1.4	0.7	0.7	0.7	0.7
85°	5.2	4.0	2.6	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)