

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: P579968

Luminaire Tested: **HC415D010-HM40525940-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579968
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: HC415D010-HM40525940-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1417.1 lumens
Efficiency: N/A
Efficacy: 101.2 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

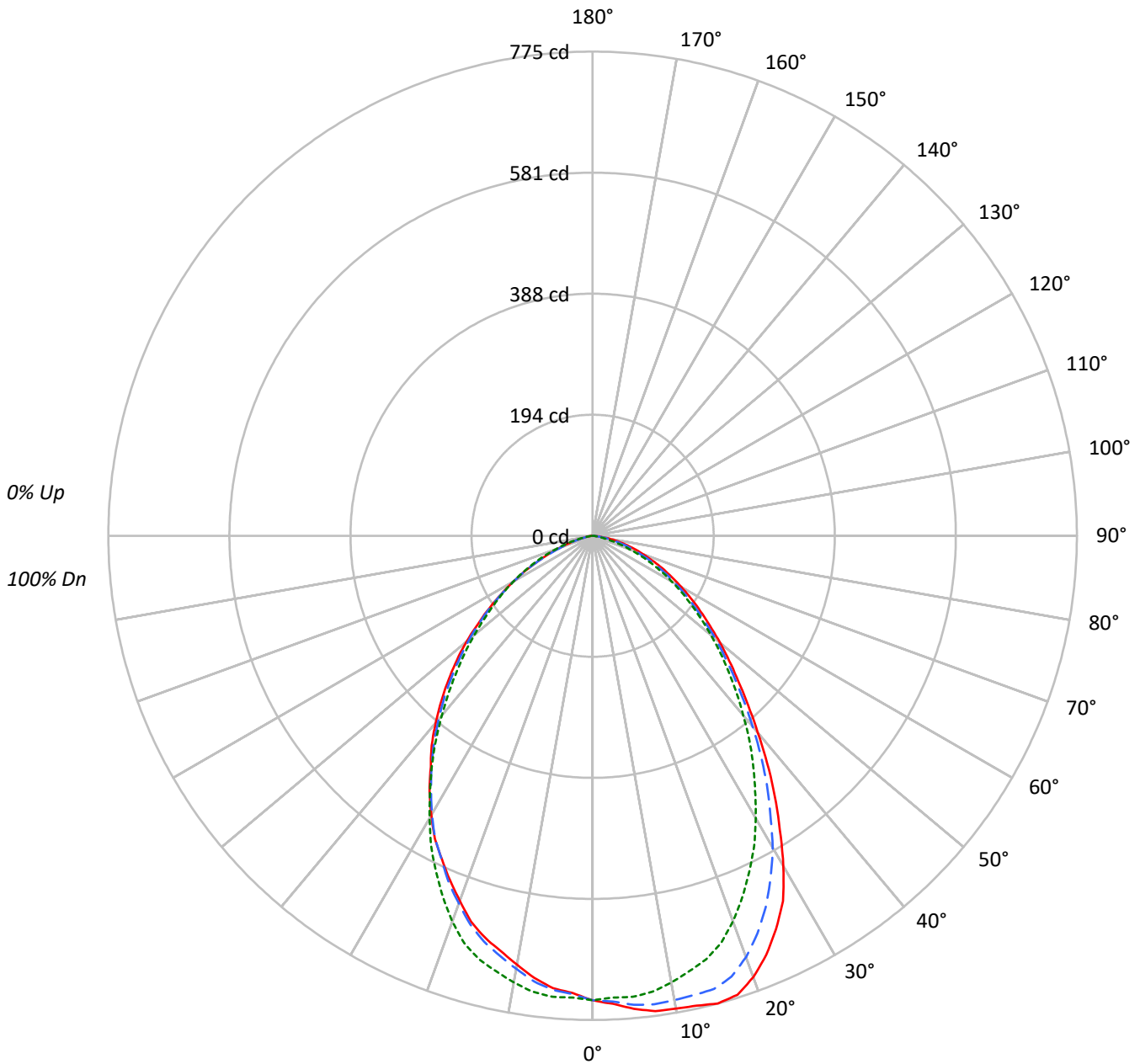
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	91707	91707	91707
5°	94113	91723	90002
10°	96241	90930	87336
15°	98952	89643	85033
20°	98683	86200	81592
25°	94533	80692	77684
30°	86952	74333	73535
35°	76493	67459	68001
40°	66178	60381	62909
45°	57512	53657	56866
50°	51024	47321	50506
55°	45289	41525	43310
60°	40334	35992	35992
65°	35840	29945	28048
70°	30943	22648	19979
75°	25973	14964	12296
80°	19676	7174	6535
85°	10473	2547	2547



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	5.0
10°-20°	199.6	14.1
20°-30°	281.5	19.9
30°-40°	290.8	20.5
40°-50°	246.5	17.4
50°-60°	179.4	12.7
60°-70°	104.8	7.4
70°-80°	38.9	2.7
80°-90°	5.1	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°	551.5	38.9
0°-40°	842.4	59.4
0°-60°	1268.3	89.5
0°-90°	1417.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1417.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	744	744	744	744	744	
5°	760	754	741	730	727	73
15°	775	751	702	672	666	218
25°	695	656	593	572	571	318
35°	508	486	448	449	452	317
45°	330	320	308	319	326	257
55°	211	200	193	200	201	189
65°	123	113	103	96	96	122
75°	54	45	31	25	26	59
85°	7	5	2	2	2	10
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°	743.5	743.5	743.5	743.5	743.5	743.5	743.5	743.5	743.5
2.5°	750.0	748.1	746.2	743.5	739.8	737.0	734.3	732.5	732.5
5°	760.1	757.4	753.6	747.2	740.8	735.2	729.6	726.9	726.9
7.5°	767.5	763.8	756.4	747.2	736.1	727.8	719.5	715.7	713.9
10°	768.4	764.7	754.6	740.8	726.0	713.0	703.8	698.2	697.3
12.5°	770.3	765.7	752.7	733.4	713.9	698.2	688.1	682.5	680.7
15°	774.9	768.4	750.9	726.0	702.0	683.5	672.4	667.8	665.9
17.5°	770.3	761.0	739.8	710.3	683.5	663.1	652.1	647.4	647.4
20°	751.8	742.6	717.7	685.3	656.7	637.3	626.1	623.4	621.6
22.5°	726.0	715.7	689.0	654.8	626.1	608.6	601.2	597.6	596.7
25°	694.6	684.4	655.7	620.7	592.9	578.2	571.7	571.7	570.8
27.5°	659.5	646.5	616.9	586.5	559.7	548.6	545.9	545.9	546.8
30°	610.5	601.2	576.3	546.8	521.9	514.5	514.5	516.3	516.3
32.5°	557.8	551.4	529.3	503.3	484.0	479.4	481.2	484.9	485.8
35°	508.0	500.6	485.8	462.8	448.0	446.0	448.9	451.6	451.6
37.5°	459.0	451.6	441.5	423.0	411.9	412.8	416.6	420.2	423.0
40°	411.0	405.5	398.1	383.3	375.0	378.6	383.3	387.0	390.7
42.5°	368.5	362.9	357.5	346.3	340.8	345.4	351.0	354.6	358.4
45°	329.7	326.0	320.5	311.2	307.6	312.2	318.6	322.3	326.0
47.5°	296.5	294.6	287.2	278.9	277.1	281.7	287.2	291.9	294.6
50°	265.9	263.2	256.7	248.4	246.6	254.0	257.6	260.5	263.2
52.5°	236.5	233.7	226.3	218.9	218.9	224.4	227.2	228.1	230.9
55°	210.6	207.8	200.5	194.9	193.1	197.6	199.5	199.5	201.4
57.5°	186.6	183.9	176.5	170.0	169.1	171.8	171.8	171.8	172.7
60°	163.5	160.7	153.3	147.8	145.9	146.9	145.9	145.0	145.9
62.5°	142.2	139.5	132.1	125.6	123.7	123.7	121.0	120.1	121.0
65°	122.8	118.2	112.7	106.2	102.6	99.7	96.1	96.1	96.1
67.5°	103.5	99.7	93.2	86.9	82.2	77.5	72.1	73.9	74.8
70°	85.8	83.1	75.7	69.2	62.8	57.3	52.6	54.5	55.4
72.5°	70.2	66.5	60.0	52.6	47.1	39.7	37.0	38.8	38.8
75°	54.5	50.8	45.3	37.9	31.4	24.9	24.9	25.8	25.8
77.5°	40.6	37.0	31.4	24.9	19.4	14.8	15.7	15.7	15.7
80°	27.7	24.9	20.4	14.8	10.1	8.3	8.3	8.3	9.2
82.5°	15.7	13.9	11.0	7.4	4.7	4.7	4.7	4.7	4.7
85°	7.4	5.6	4.7	2.7	1.8	1.8	1.8	1.8	1.8
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)