

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: P592651

Luminaire Tested: **HC415D010-HM40525950-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592651
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC415D010-HM40525950-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1424.5 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

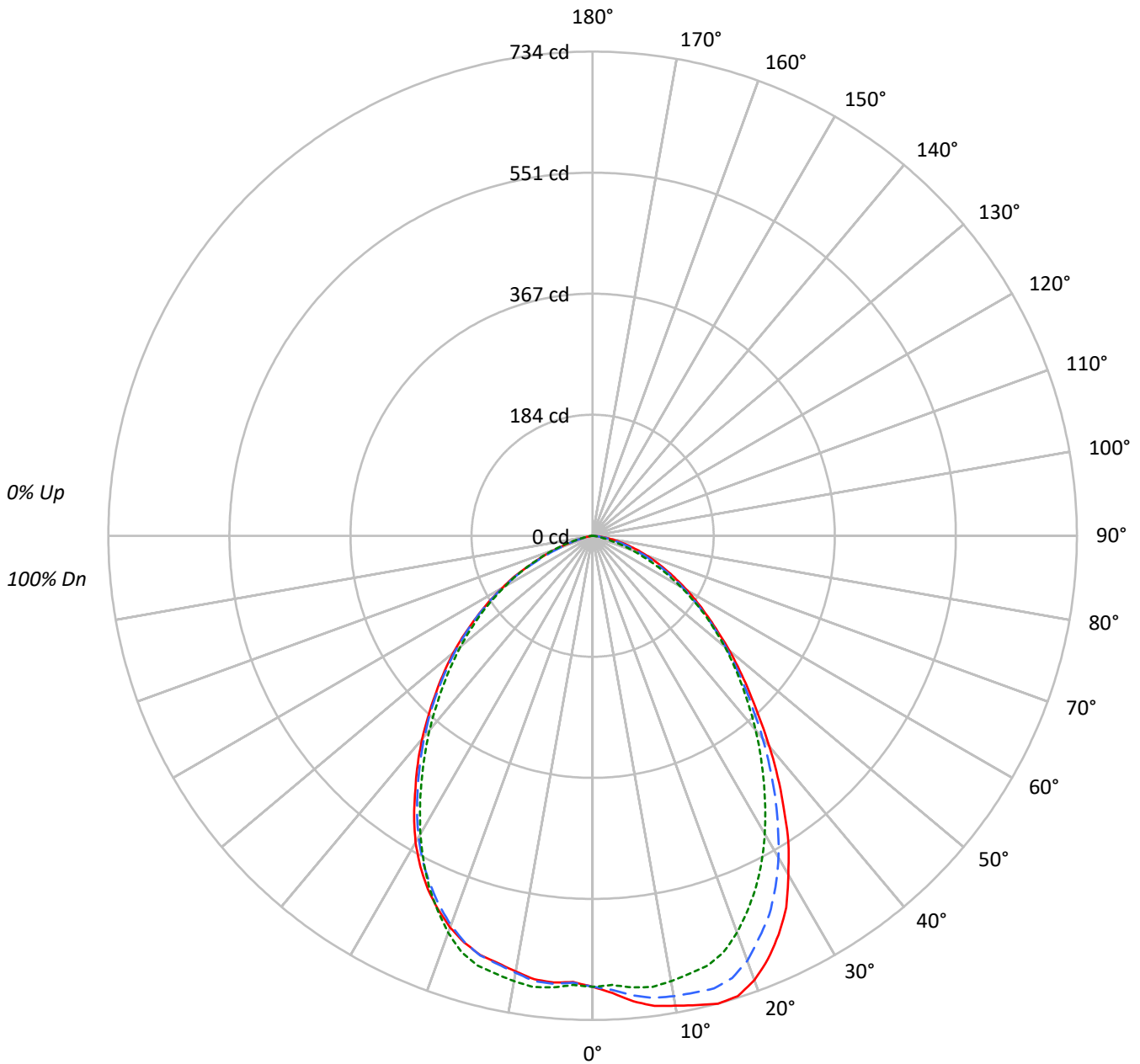
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67			67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52			52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41			41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	84319	84319	84319
5°	87737	85099	84183
10°	90605	85858	84004
15°	93781	86119	83999
20°	94101	84021	82931
25°	90777	79834	80460
30°	84474	74333	76441
35°	76087	68016	70515
40°	67079	61879	64696
45°	58646	55750	58489
50°	51945	50160	52828
55°	45697	44300	46084
60°	40778	37842	38953
65°	35870	30733	30208
70°	31339	22648	20665
75°	25973	13678	11009
80°	19676	5256	3339
85°	9199	1274	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.9	4.6
10°-20°	192.4	13.5
20°-30°	278.7	19.6
30°-40°	294.0	20.6
40°-50°	254.4	17.9
50°-60°	188.5	13.2
60°-70°	108.6	7.6
70°-80°	38.0	2.7
80°-90°	4.0	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°	537.0	37.7
0°-40°	831.0	58.3
0°-60°	1273.9	89.4
0°-90°	1424.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1424.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	684	684	684	684	684	
5°	709	699	687	682	680	68
15°	734	710	674	659	658	207
25°	667	634	587	583	591	305
35°	505	482	452	462	468	316
45°	336	327	320	332	335	261
55°	212	208	206	213	214	192
65°	123	116	105	100	104	123
75°	54	46	29	23	23	59
85°	6	4	1	1	1	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°	683.6	683.6	683.6	683.6	683.6	683.6	683.6	683.6	683.6
2.5°	693.8	691.9	689.1	685.5	681.7	679.0	678.1	677.1	677.1
5°	708.6	704.8	699.3	691.9	687.3	684.5	681.7	679.9	679.9
7.5°	718.7	714.9	706.6	696.5	690.0	684.5	680.8	678.1	678.1
10°	723.4	718.7	708.6	695.6	685.5	678.1	672.5	670.7	670.7
12.5°	728.8	723.4	709.5	692.9	679.9	670.7	665.1	663.3	663.3
15°	734.4	727.9	710.4	691.0	674.4	663.3	658.7	657.8	657.8
17.5°	731.7	723.4	703.0	679.9	661.4	650.4	645.7	645.7	646.6
20°	716.9	708.6	685.5	659.6	640.1	631.8	628.2	630.0	631.8
22.5°	694.7	684.5	659.6	634.7	614.3	606.9	606.9	609.7	612.5
25°	667.0	657.8	633.8	606.0	586.6	581.0	582.9	587.5	591.2
27.5°	635.6	625.4	600.4	574.6	555.2	552.5	557.0	563.5	565.3
30°	593.1	584.8	563.5	538.6	521.9	521.0	527.5	532.1	536.7
32.5°	552.5	543.1	522.9	498.8	486.9	487.8	495.2	500.7	503.5
35°	505.3	497.0	482.2	462.8	451.7	453.5	461.8	467.4	468.3
37.5°	460.9	455.4	440.6	425.8	417.5	421.3	428.6	435.1	435.1
40°	416.6	412.0	400.9	388.9	384.3	388.9	396.2	401.8	401.8
42.5°	374.1	371.3	362.1	353.8	351.0	357.5	364.0	368.6	367.7
45°	336.2	333.5	327.0	320.5	319.6	326.1	331.7	334.4	335.3
47.5°	302.1	300.3	294.7	290.0	290.0	296.5	301.2	303.9	304.8
50°	270.7	268.8	264.2	260.5	261.4	267.9	271.6	274.4	275.3
52.5°	239.2	238.3	234.7	230.0	232.7	237.4	242.1	243.9	244.8
55°	212.5	212.5	207.8	204.2	206.0	210.6	213.4	214.3	214.3
57.5°	188.4	187.5	182.0	178.3	179.2	183.9	185.7	186.6	186.6
60°	165.3	164.4	158.8	153.4	153.4	156.1	157.0	157.9	157.9
62.5°	143.1	142.2	135.8	131.2	129.3	128.4	128.4	130.3	133.9
65°	122.9	121.9	115.5	108.1	105.3	102.6	99.7	101.6	103.5
67.5°	104.4	102.6	96.1	89.6	83.1	78.6	73.9	76.6	80.4
70°	86.9	84.9	77.5	70.2	62.8	55.4	51.7	55.4	57.3
72.5°	70.2	68.3	60.9	53.6	44.3	37.0	36.0	37.0	37.9
75°	54.5	53.6	46.2	37.9	28.7	23.1	23.1	23.1	23.1
77.5°	40.6	38.8	31.4	24.0	16.6	13.0	12.1	12.1	12.1
80°	27.7	25.8	19.4	13.9	7.4	5.6	5.6	4.7	4.7
82.5°	15.7	14.8	10.1	5.6	2.7	1.8	1.8	1.8	1.8
85°	6.5	5.6	3.6	1.8	0.9	0.9	0.9	0.9	0.9
87.5°	0.9	0.9	0.9	0.0	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)