

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: P592636

Luminaire Tested: **HC415D010-HM40525850-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC415D010-HM40525850-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1557.2 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

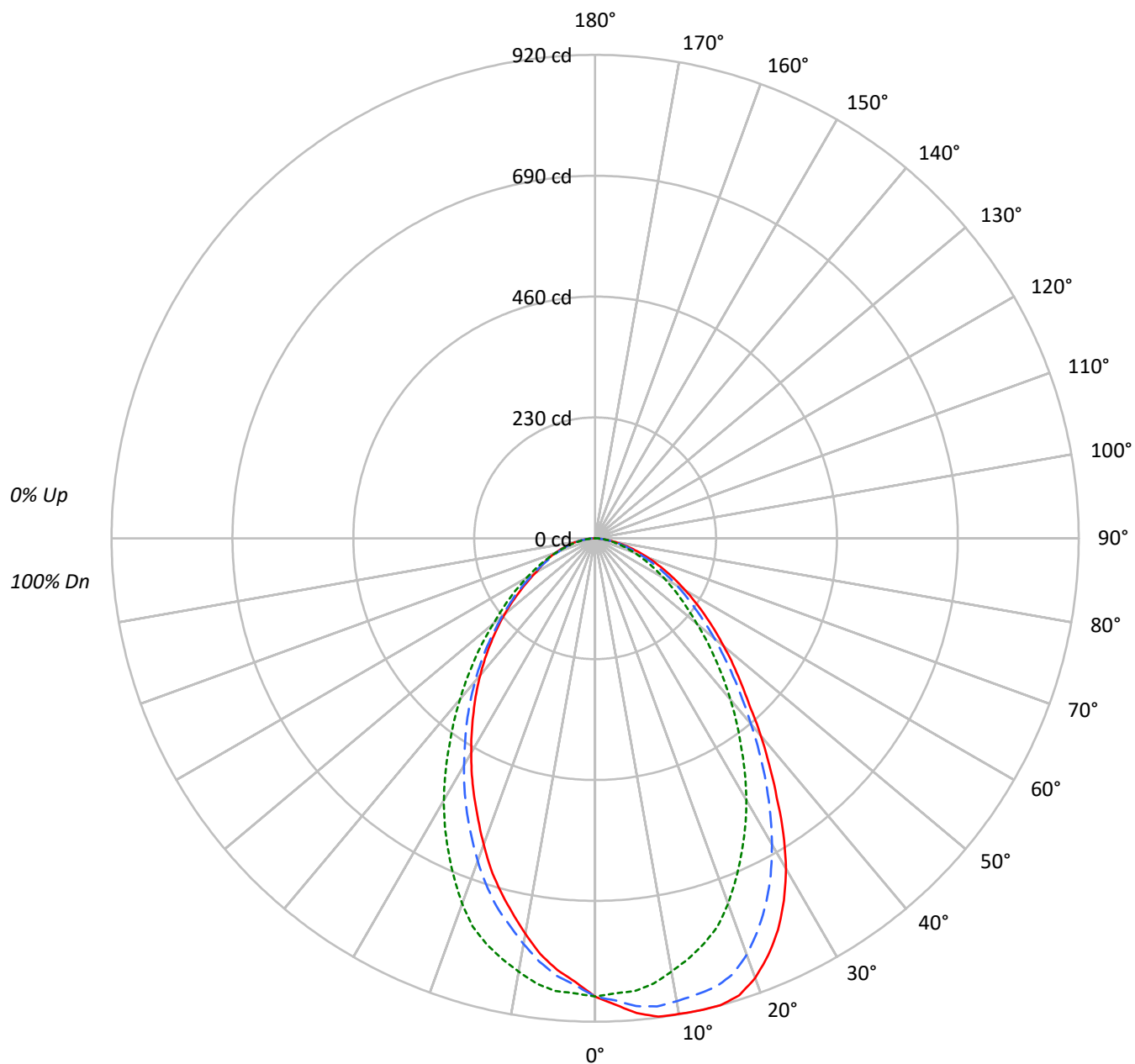
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	106	103	100	108	104	101	98		100	97	95			96	94	92			93
2	102	95	89	84	100	93	88	83		90	85	81			87	83	80			84
3	94	85	78	72	92	84	77	72		81	75	71			78	73	69			76
4	87	77	69	63	85	76	68	63		73	67	62			71	66	61			69
5	81	70	62	56	79	69	61	56		67	60	55			65	59	54			63
6	76	64	56	50	74	63	55	50		61	54	49			59	53	49			58
7	71	58	50	45	69	58	50	45		56	49	44			55	49	44			53
8	66	54	46	41	65	53	46	41		52	45	40			51	45	40			50
9	62	50	42	37	61	49	42	37		48	42	37			47	41	37			46
10	59	46	39	34	57	46	39	34		45	38	34			44	38	34			43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	107570	107570	107570
5°	112289	107077	102124
10°	115141	104858	95727
15°	117519	102055	88826
20°	116889	97094	81343
25°	111967	89783	73996
30°	103445	81967	67069
35°	90678	72909	60713
40°	78962	64423	54681
45°	68728	56186	48842
50°	61213	48433	43118
55°	54729	42579	37289
60°	48845	37201	32144
65°	43400	32659	30529
70°	38083	28130	28490
75°	32312	23972	26402
80°	24790	20457	24080
85°	14435	15992	20238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	5.2
10°-20°	225.5	14.5
20°-30°	308.0	19.8
30°-40°	309.3	19.9
40°-50°	255.9	16.4
50°-60°	185.4	11.9
60°-70°	117.5	7.5
70°-80°	59.4	3.8
80°-90°	14.5	0.9
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°	615.3	39.5
0°-40°	924.6	59.4
0°-60°	1365.9	87.7
0°-90°	1557.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1557.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	872	872	872	872	872	
5°	907	894	865	836	825	87
15°	920	884	799	725	696	259
25°	823	768	660	577	544	376
35°	602	566	484	425	403	377
45°	394	371	322	290	280	306
55°	254	232	198	181	173	229
65°	149	132	112	100	105	148
75°	68	58	50	52	55	72
85°	10	10	11	13	14	14
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°	872.1	872.1	872.1	872.1	872.1	872.1	872.1	872.1	872.1
2.5°	888.5	885.4	880.3	874.1	866.8	858.7	851.5	847.4	845.4
5°	906.9	902.8	893.6	880.3	864.8	849.5	836.1	828.0	824.8
7.5°	918.2	912.0	898.7	878.2	854.6	832.1	812.5	801.2	798.2
10°	919.3	912.0	894.6	866.8	837.2	807.4	783.8	767.4	764.3
12.5°	920.3	911.0	889.5	856.6	819.7	782.8	754.1	734.5	729.4
15°	920.3	911.0	884.4	845.4	799.2	757.1	725.3	702.8	695.6
17.5°	912.0	901.8	870.0	824.8	774.5	727.3	690.4	666.9	659.7
20°	890.5	879.2	843.3	794.1	739.7	690.4	653.5	628.9	619.7
22.5°	859.7	846.4	808.4	755.1	700.7	650.5	614.5	588.9	580.7
25°	822.7	809.4	768.4	716.1	659.7	612.5	576.6	552.9	543.7
27.5°	777.6	763.3	723.2	670.9	618.6	571.5	538.6	517.1	507.8
30°	726.3	711.0	673.0	622.7	575.5	530.4	498.6	481.2	470.9
32.5°	666.9	653.5	619.7	574.5	530.4	487.3	460.6	445.2	437.1
35°	602.2	595.0	566.3	527.3	484.2	448.3	424.8	410.3	403.2
37.5°	544.7	537.6	512.9	480.2	442.2	409.3	389.9	377.5	371.3
40°	490.4	484.2	460.6	433.0	400.1	371.3	355.0	345.8	339.6
42.5°	437.1	434.0	414.4	388.9	360.1	335.5	322.1	314.9	309.8
45°	394.0	389.9	371.3	346.8	322.1	301.6	290.4	285.2	280.0
47.5°	356.0	350.9	331.3	309.8	287.2	268.8	258.6	253.4	251.4
50°	319.0	313.9	296.5	274.9	252.4	239.0	230.8	225.7	224.7
52.5°	286.2	281.1	261.6	241.0	223.6	212.4	205.2	200.0	198.0
55°	254.5	248.3	231.8	212.4	198.0	187.7	180.6	175.4	173.4
57.5°	225.7	219.6	205.2	186.7	173.4	164.2	158.0	152.8	150.8
60°	198.0	192.8	179.5	162.1	150.8	142.6	136.4	132.3	130.3
62.5°	172.4	168.3	154.9	139.5	130.3	123.1	118.0	113.9	116.0
65°	148.7	144.6	132.3	119.0	111.9	104.6	100.5	100.5	104.6
67.5°	126.2	122.1	111.9	100.5	94.4	89.3	86.2	89.3	92.3
70°	105.6	101.5	92.3	83.1	78.0	73.9	73.9	77.0	79.0
72.5°	86.2	82.1	74.9	67.8	63.6	60.5	63.6	65.6	67.8
75°	67.8	64.6	58.4	53.3	50.3	49.2	52.3	54.3	55.4
77.5°	50.3	48.2	44.1	40.0	38.0	39.0	42.1	43.1	44.1
80°	34.9	33.9	30.8	28.8	28.8	29.8	31.8	32.9	33.9
82.5°	21.5	21.5	19.4	18.4	19.4	21.5	22.6	23.6	23.6
85°	10.2	11.3	10.2	10.2	11.3	13.3	13.3	14.3	14.3
87.5°	3.1	3.1	4.1	4.1	5.1	5.1	5.1	5.1	6.1
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)