

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: P592653

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592653
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: HC415D010-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: 1121.5 lumens
Efficiency: N/A
Efficacy: 80.1 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

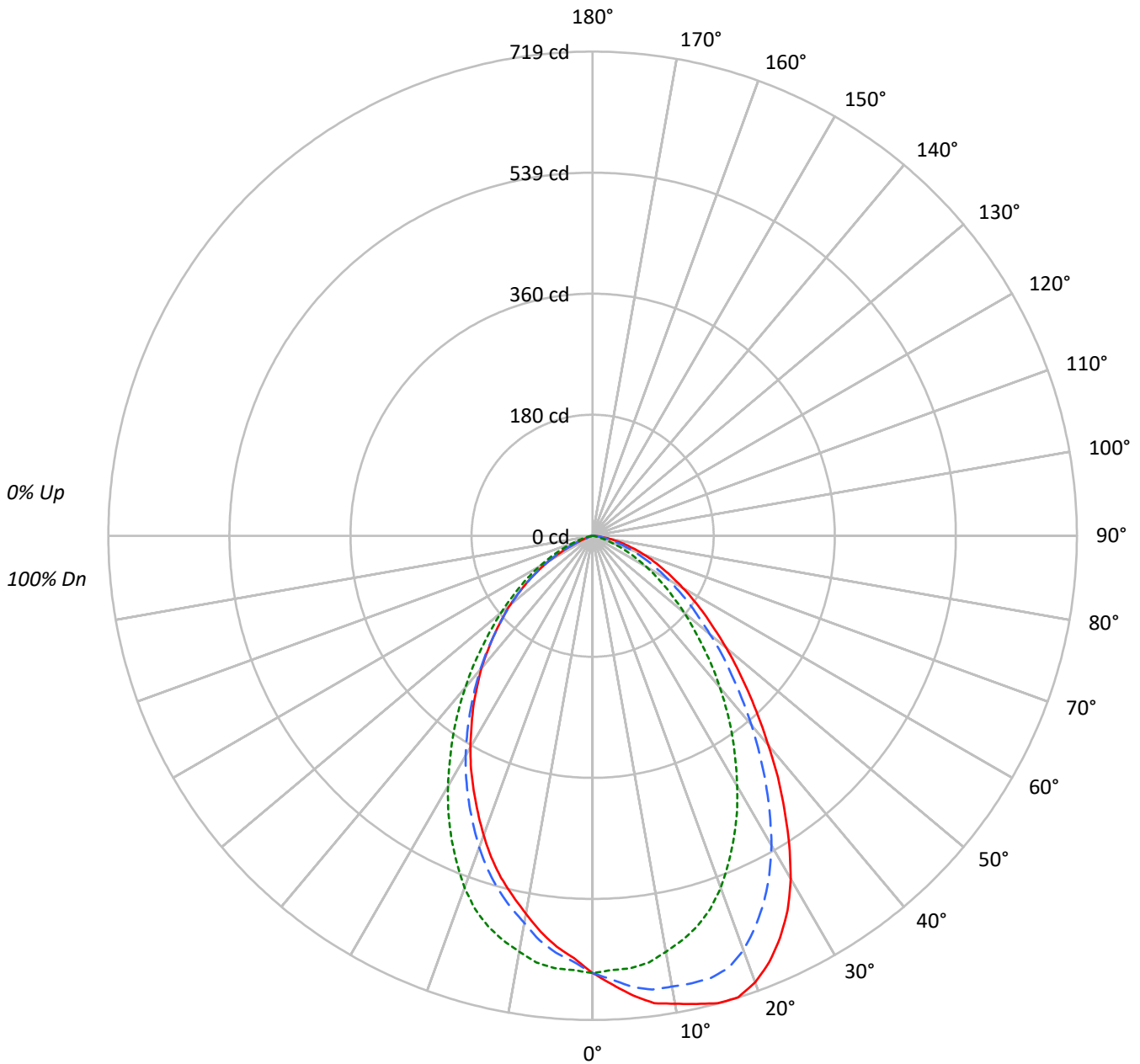
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	43	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°	80076	80076	80076
5°	84852	79825	75825
10°	88375	78543	71379
15°	91763	76656	67105
20°	92618	72981	62074
25°	89633	67504	56820
30°	83790	61158	51687
35°	74686	54373	46453
40°	65292	47290	41333
45°	56866	40121	35760
50°	49623	34042	30645
55°	43504	28193	24816
60°	38064	22770	18230
65°	33155	16986	10244
70°	28995	10999	3318
75°	23781	5767	858
80°	17687	2557	639
85°	10473	1274	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.3	5.5
10°-20°	171.5	15.3
20°-30°	237.1	21.1
30°-40°	238.4	21.3
40°-50°	192.4	17.2
50°-60°	130.1	11.6
60°-70°	66.2	5.9
70°-80°	21.2	1.9
80°-90°	3.2	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°	469.9	41.9
0°-40°	708.3	63.2
0°-60°	1030.8	91.9
0°-90°	1121.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1121.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	649	649	649	649	649	
5°	685	672	645	622	612	66
15°	719	680	600	543	526	202
25°	659	601	496	435	418	301
35°	496	448	361	316	308	310
45°	326	292	230	205	205	253
55°	202	174	131	114	115	182
65°	114	92	58	38	35	114
75°	50	35	12	3	2	54
85°	7	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°	649.2	649.2	649.2	649.2	649.2	649.2	649.2	649.2	649.2
2.5°	666.9	663.1	659.5	653.0	645.6	638.2	633.5	629.9	628.1
5°	685.3	680.7	672.4	658.6	644.7	631.7	621.6	615.1	612.4
7.5°	700.1	693.6	679.7	660.4	639.1	618.8	605.9	596.6	592.9
10°	705.6	698.2	679.7	653.9	627.1	602.2	583.7	574.4	569.9
12.5°	712.1	703.8	680.7	648.3	615.1	585.6	564.3	552.4	547.7
15°	718.6	707.4	679.7	640.0	600.3	566.1	543.0	531.1	525.5
17.5°	718.6	705.6	672.4	626.1	580.9	545.0	519.0	505.2	500.6
20°	705.6	690.8	654.8	604.0	556.0	517.2	492.3	478.4	472.9
22.5°	685.3	668.7	629.9	577.3	526.4	488.6	463.7	450.7	445.1
25°	658.6	641.8	601.2	546.8	496.0	458.1	435.0	423.0	417.5
27.5°	627.1	608.6	568.0	513.5	463.7	427.6	406.4	395.3	390.7
30°	588.3	570.8	531.1	477.5	429.4	396.2	376.8	366.7	362.9
32.5°	543.0	528.3	489.5	439.7	394.3	363.8	346.3	338.0	334.4
35°	496.0	482.1	448.0	401.7	361.1	332.5	315.9	310.3	308.5
37.5°	451.6	439.7	406.4	363.8	327.0	302.0	287.2	283.6	281.6
40°	405.5	397.2	366.7	327.9	293.7	271.5	259.6	256.7	256.7
42.5°	363.8	354.6	327.9	292.8	262.3	240.1	231.8	229.0	230.0
45°	326.0	316.8	291.9	259.6	230.0	211.5	205.0	205.0	205.0
47.5°	291.0	282.7	259.6	226.3	202.3	187.5	181.0	181.0	181.9
50°	258.6	253.1	227.2	198.5	177.4	163.5	158.8	157.9	159.7
52.5°	228.1	221.7	198.5	172.7	152.4	141.3	136.7	135.8	136.7
55°	202.3	194.9	174.5	149.6	131.1	120.1	114.5	113.6	115.4
57.5°	177.4	171.8	150.5	128.4	110.9	99.7	95.2	93.2	94.3
60°	154.3	148.7	129.3	108.0	92.3	81.3	74.8	73.0	73.9
62.5°	133.0	128.4	109.9	89.6	73.9	63.7	57.3	52.6	54.5
65°	113.6	109.0	92.3	72.1	58.2	47.1	37.9	34.2	35.1
67.5°	97.0	91.4	75.7	57.3	43.4	31.4	21.3	19.4	19.4
70°	80.4	74.8	60.9	44.3	30.5	16.6	9.2	9.2	9.2
72.5°	64.7	60.0	47.1	33.2	19.4	7.4	3.6	3.6	3.6
75°	49.9	46.2	35.1	23.1	12.1	3.6	2.7	1.8	1.8
77.5°	37.0	33.2	24.9	15.7	7.4	1.8	1.8	1.8	1.8
80°	24.9	22.2	16.6	9.2	3.6	0.9	0.9	0.9	0.9
82.5°	14.8	13.0	9.2	4.7	1.8	0.9	0.9	0.9	0.9
85°	7.4	5.6	3.6	1.8	0.9	0.9	0.9	0.9	0.9
87.5°	1.8	0.9	0.9	0.9	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)