

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: P583941

Luminaire Tested: **HC815D010-HM80520935-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC815D010-HM80520935-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1404.9 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

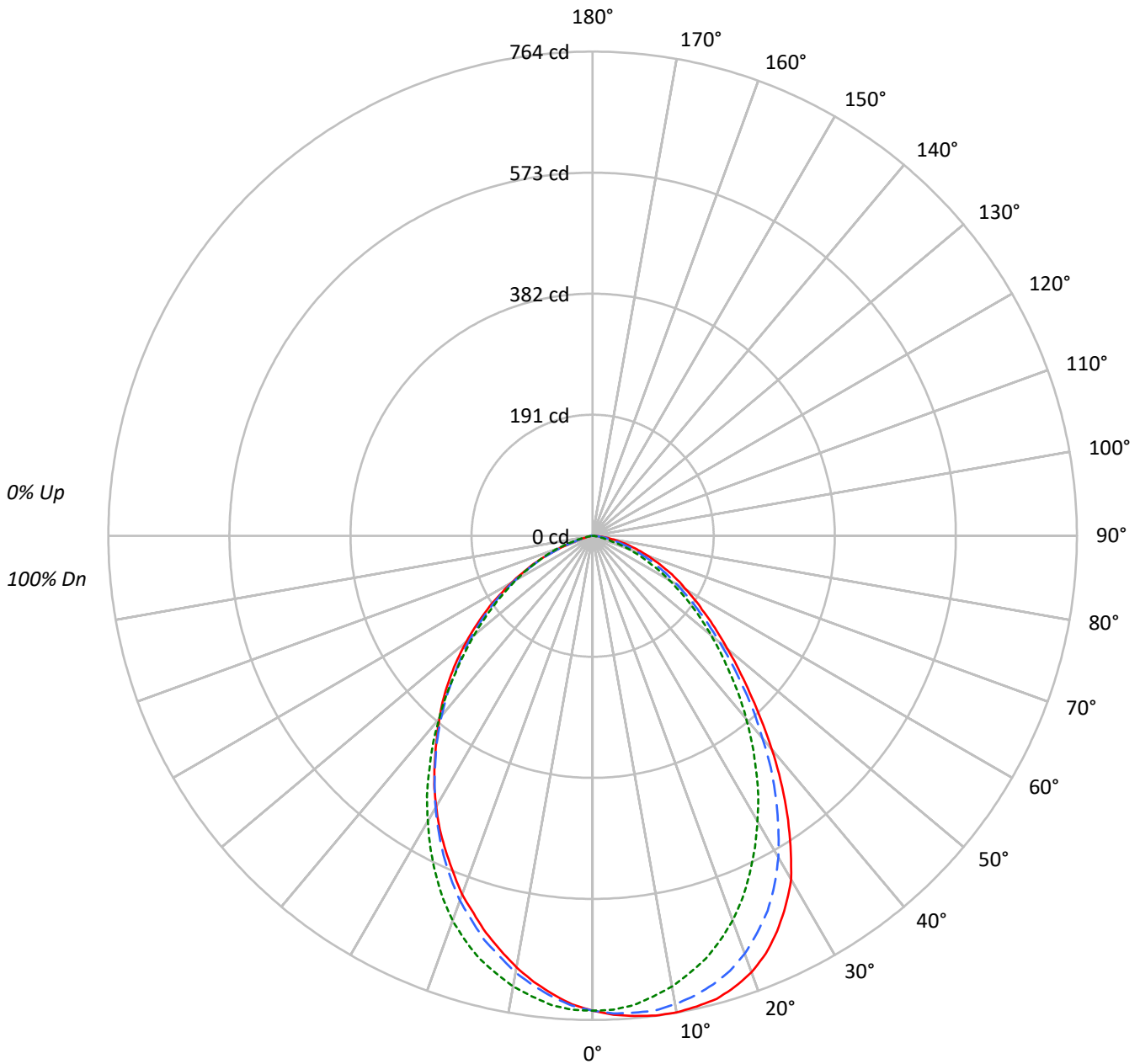
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	63	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	62	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	36	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°	23109	23109	23109
5°	23544	23011	22473
10°	23910	22607	21652
15°	24151	22047	20716
20°	24057	21195	19758
25°	23426	19972	18659
30°	22311	18515	17575
35°	20143	16898	16323
40°	17700	15168	15123
45°	15276	13331	13903
50°	13303	11696	12468
55°	11790	10150	10865
60°	10521	8585	9023
65°	9485	6961	7114
70°	8421	5211	4219
75°	7268	3026	1811
80°	5594	1083	533
85°	3573	354	354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	5.0
10°-20°	195.8	13.9
20°-30°	277.0	19.7
30°-40°	291.9	20.8
40°-50°	248.1	17.7
50°-60°	178.6	12.7
60°-70°	103.0	7.3
70°-80°	35.3	2.5
80°-90°	4.8	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°	543.2	38.7
0°-40°	835.1	59.4
0°-60°	1261.8	89.8
0°-90°	1404.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1404.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	749	749	749	749	749	
5°	761	756	743	730	726	73
15°	756	733	691	660	649	213
25°	688	653	587	556	548	316
35°	535	504	449	433	434	333
45°	350	334	306	308	319	272
55°	219	202	189	196	202	197
65°	130	112	95	93	98	129
75°	61	46	25	16	15	64
85°	10	6	1	1	1	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4
2.5°	756.5	757.6	756.5	756.5	755.5	754.5	753.5	752.5	750.5	748.4	748.4
5°	760.6	762.6	760.6	760.6	757.6	755.5	753.5	750.5	746.4	743.4	743.4
7.5°	763.6	763.6	763.6	760.6	758.5	755.5	750.5	745.4	740.2	735.2	733.1
10°	763.6	763.6	762.6	758.5	756.5	750.5	745.4	738.3	731.2	724.1	722.0
12.5°	760.6	761.6	759.6	755.5	750.5	743.4	736.3	727.1	718.9	710.8	706.7
15°	756.5	755.5	753.5	748.4	742.3	733.1	726.0	715.9	704.8	694.6	690.6
17.5°	746.4	746.4	743.4	738.3	730.1	720.0	708.8	697.7	685.4	674.3	669.3
20°	733.1	733.1	729.1	723.0	714.9	701.7	689.5	676.4	662.1	650.9	645.9
22.5°	713.8	714.9	709.9	702.8	693.6	678.3	666.1	649.9	635.6	622.5	618.4
25°	688.5	690.6	685.4	678.3	666.1	653.0	637.7	622.5	606.2	593.1	587.0
27.5°	659.0	660.1	655.0	647.9	635.6	621.4	606.2	590.0	574.8	560.6	554.4
30°	626.6	622.5	620.5	611.3	598.2	586.0	568.6	555.5	539.2	527.1	520.0
32.5°	580.8	582.9	576.8	569.7	559.5	545.3	531.0	515.9	500.7	491.5	486.5
35°	535.1	537.2	534.2	527.1	515.9	503.7	489.5	478.3	465.1	453.9	448.9
37.5°	487.4	487.4	485.4	481.4	473.2	462.0	447.8	436.7	425.5	416.3	413.3
40°	439.7	437.7	436.7	433.6	426.4	416.3	407.2	398.0	386.9	380.8	376.8
42.5°	393.0	393.0	390.9	387.9	380.8	375.7	366.6	356.4	348.4	342.2	342.2
45°	350.3	351.4	348.4	346.3	342.2	334.1	326.0	318.8	311.7	307.6	305.7
47.5°	312.8	312.8	309.7	307.6	303.7	296.6	289.4	283.3	278.2	275.2	274.1
50°	277.3	277.3	277.3	272.2	267.0	262.0	256.9	249.8	246.8	244.7	243.8
52.5°	246.8	245.7	245.7	241.7	236.7	230.5	225.5	219.3	216.3	214.2	215.3
55°	219.3	219.3	218.3	213.3	208.2	202.1	197.0	192.0	189.9	187.9	188.8
56°	208.2	208.2	207.1	203.0	197.0	192.0	185.8	180.8	177.7	178.7	178.7
57°	200.0	198.0	198.0	192.9	187.9	180.8	175.7	170.6	168.6	167.5	167.5
58°	189.9	188.8	187.9	182.8	177.7	171.6	166.5	161.5	158.5	158.5	157.4
59°	179.8	179.8	177.7	173.6	168.6	162.4	157.4	152.3	149.3	148.2	148.2
60°	170.6	171.6	168.6	164.5	160.5	153.4	147.3	143.2	140.1	139.2	139.2
61°	162.4	162.4	160.5	155.3	150.3	145.2	139.2	134.0	132.1	130.0	130.0
62°	155.3	153.4	152.3	147.3	142.2	136.0	131.0	125.9	122.9	120.9	121.8
63°	146.3	145.2	143.2	139.2	134.0	128.0	121.8	117.8	114.7	111.7	112.7
64°	139.2	138.1	135.1	131.0	125.9	119.8	113.8	109.7	107.6	104.6	103.6
65°	130.0	128.9	128.0	122.9	117.8	111.7	106.6	102.5	99.5	97.5	95.4
66°	121.8	122.9	120.9	116.8	110.7	105.6	98.4	94.5	92.4	89.4	87.4
67°	114.7	114.7	112.7	108.7	102.5	97.5	92.4	87.4	84.2	81.2	80.3
67.5°	110.7	110.7	108.7	103.6	99.5	93.4	88.3	84.2	80.3	78.2	76.2
68°	106.6	106.6	105.6	101.6	96.5	90.4	85.3	80.3	76.2	73.1	72.1
69°	99.5	100.5	98.4	94.5	89.4	83.3	78.2	74.1	70.0	67.0	64.9
70°	93.4	92.4	90.4	86.3	81.2	77.1	72.1	67.0	62.9	58.9	57.8
71°	85.3	85.3	83.3	80.3	75.2	70.0	64.9	61.0	56.9	51.8	50.7
72°	79.2	79.2	77.1	73.1	69.0	64.0	58.9	53.9	50.7	45.7	43.6
72.5°	75.2	76.2	74.1	70.0	66.0	59.9	55.8	51.8	46.8	42.7	40.6
73°	73.1	72.1	71.1	67.0	61.9	57.8	52.8	48.8	43.6	39.6	37.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	45.7	45.7	44.7	40.6	36.5	32.5	28.4	24.3	20.4	16.3	14.2
80°	31.5	32.5	30.5	28.4	25.4	21.3	17.2	14.2	10.1	8.1	6.1
82.5°	20.4	20.4	19.3	17.2	15.2	12.2	10.1	7.1	5.1	4.1	3.0
85°	10.1	11.2	10.1	9.2	7.1	6.1	5.1	3.0	2.0	1.0	1.0
87.5°	4.1	4.1	4.1	3.0	3.0	2.0	1.0	1.0	1.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4	749.4
2.5°	746.4	746.4	744.3	743.4	742.3	741.3	740.2	739.3	739.3	740.2
5°	740.2	738.3	734.2	733.1	730.1	729.1	727.1	726.0	727.1	726.0
7.5°	731.2	727.1	722.0	720.0	715.9	713.8	710.8	710.8	708.8	709.9
10°	718.9	712.9	706.7	702.8	699.6	696.6	694.6	692.5	691.5	691.5
12.5°	703.7	696.6	690.6	684.4	679.4	677.3	673.2	673.2	671.2	670.2
15°	686.5	677.3	670.2	664.1	660.1	656.0	653.0	650.9	648.9	648.9
17.5°	664.1	656.0	648.9	641.8	635.6	632.6	629.6	626.6	626.6	624.6
20°	639.7	630.6	624.6	617.4	612.4	607.2	603.2	603.2	601.2	602.1
22.5°	612.4	601.2	595.0	590.0	584.9	580.8	576.8	576.8	575.7	574.8
25°	581.9	572.7	565.6	559.5	556.5	552.4	551.4	549.4	548.4	548.4
27.5°	549.4	542.2	533.1	530.1	526.0	523.9	523.9	523.0	520.9	522.0
30°	514.9	506.7	501.6	499.6	495.5	495.5	494.5	492.5	492.5	493.6
32.5°	481.4	473.2	469.1	468.1	464.0	464.0	463.1	464.0	464.0	465.1
35°	444.8	437.7	436.7	433.6	432.6	432.6	432.6	434.6	436.7	433.6
37.5°	410.3	405.1	402.1	401.1	402.1	402.1	403.2	406.2	405.1	404.2
40°	374.8	370.7	368.6	368.6	370.7	372.7	372.7	375.7	376.8	375.7
42.5°	339.2	336.1	336.1	337.2	339.2	340.2	343.2	346.3	347.3	348.4
45°	305.7	305.7	305.7	306.7	307.6	309.7	313.8	316.8	317.9	318.8
47.5°	273.2	272.2	275.2	276.2	279.2	280.3	283.3	287.4	288.4	289.4
50°	242.7	244.7	245.7	248.8	250.9	250.9	254.9	256.9	259.9	259.9
52.5°	214.2	217.3	218.3	221.4	222.4	223.4	225.5	228.5	230.5	230.5
55°	188.8	189.9	192.0	192.9	195.9	197.0	199.1	200.0	203.0	202.1
56°	177.7	179.8	180.8	182.8	184.8	185.8	187.9	188.8	190.9	192.0
57°	167.5	168.6	171.6	172.7	174.6	174.6	175.7	178.7	178.7	179.8
58°	157.4	159.4	160.5	161.5	163.5	164.5	166.5	167.5	168.6	167.5
59°	148.2	149.3	150.3	150.3	152.3	152.3	155.3	157.4	158.5	158.5
60°	139.2	139.2	140.1	141.1	143.2	144.2	144.2	146.3	146.3	146.3
61°	130.0	130.0	131.0	132.1	133.0	133.0	135.1	135.1	136.0	137.1
62°	121.8	120.9	120.9	121.8	121.8	123.9	125.0	125.9	126.9	125.9
63°	112.7	111.7	111.7	111.7	111.7	113.8	113.8	114.7	116.8	115.8
64°	102.5	102.5	102.5	102.5	103.6	103.6	105.6	106.6	107.6	108.7
65°	95.4	93.4	92.4	92.4	93.4	94.5	95.4	96.5	97.5	97.5
66°	87.4	85.3	84.2	84.2	84.2	84.2	86.3	86.3	88.3	88.3
67°	78.2	76.2	75.2	74.1	74.1	74.1	77.1	76.2	76.2	76.2
67.5°	75.2	72.1	71.1	70.0	69.0	71.1	70.0	71.1	71.1	70.0
68°	71.1	69.0	67.0	64.9	64.9	64.9	66.0	67.0	66.0	64.9
69°	62.9	61.9	58.9	56.9	55.8	56.9	55.8	56.9	55.8	56.9
70°	55.8	52.8	49.8	48.8	47.7	47.7	47.7	46.8	47.7	46.8
71°	48.8	45.7	42.7	40.6	39.6	39.6	38.6	39.6	38.6	39.6
72°	41.7	38.6	34.6	32.5	32.5	32.5	32.5	31.5	32.5	31.5
72.5°	38.6	34.6	31.5	29.4	28.4	28.4	28.4	28.4	27.5	28.4
73°	35.5	31.5	27.5	26.4	26.4	26.4	25.4	24.3	25.4	25.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	12.2	9.2	8.1	8.1	8.1	8.1	8.1	8.1	7.1	7.1
80°	5.1	4.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	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	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°







74°	66.0	66.0	64.0	61.0	55.8	50.7	46.8	42.7	37.6	32.5	30.5
75°	61.0	59.9	57.8	54.8	50.7	45.7	41.7	36.5	32.5	27.5	25.4





74°	29.4	24.3	22.3	20.4	20.4	20.4	19.3	19.3	19.3	20.4
75°	23.4	19.3	17.2	15.2	16.3	15.2	16.3	15.2	15.2	15.2



(END OF REPORT)