

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: P583890

Luminaire Tested: **HC815D010-HM80520840-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583890
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-HM80520840-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1644.7 lumens
Efficiency: N/A
Efficacy: 117.5 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

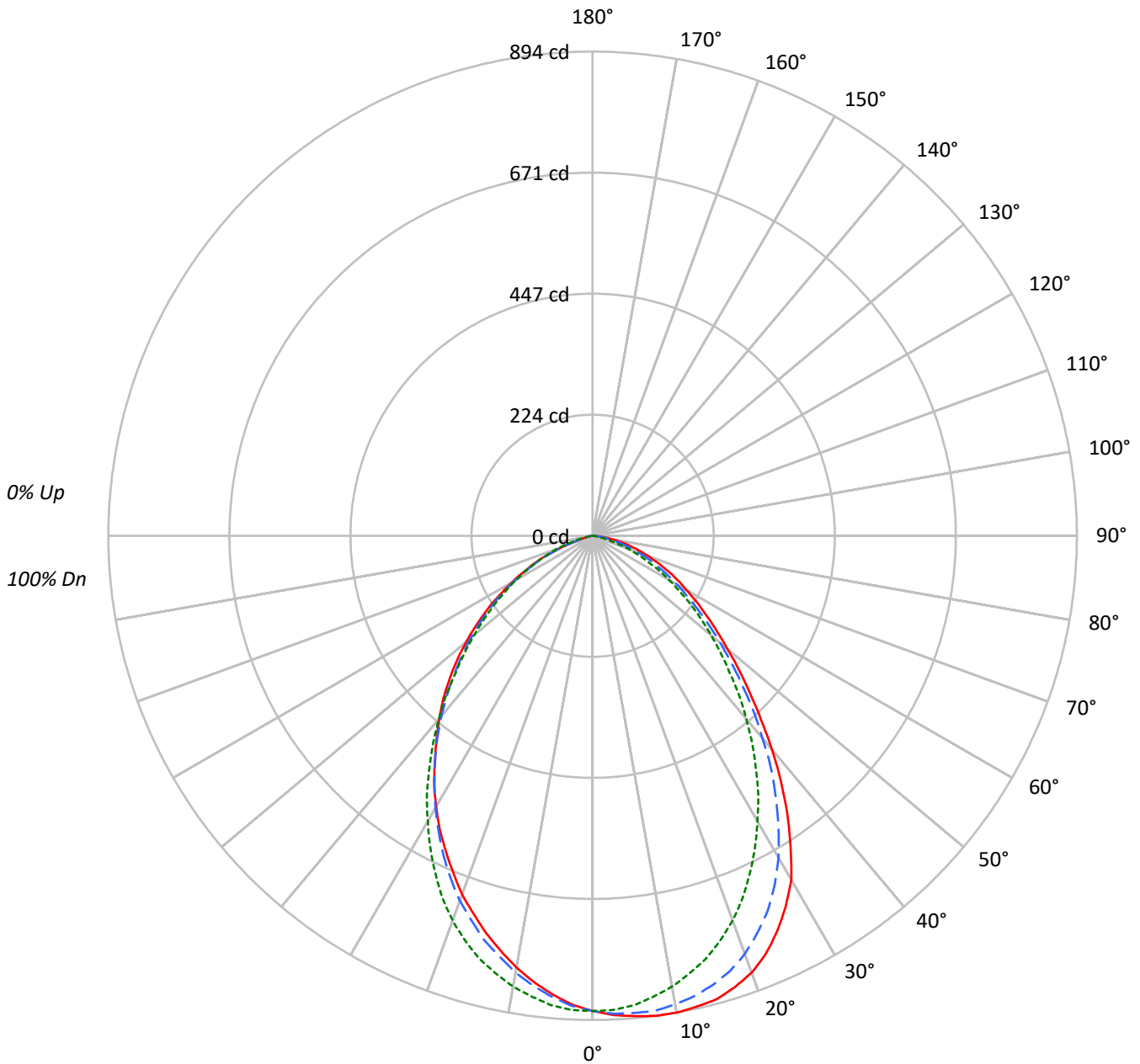
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	27056	27056	27056
5°	27562	26939	26311
10°	27993	26465	25347
15°	28275	25807	24250
20°	28165	24808	23132
25°	27423	23378	21840
30°	26118	21670	20574
35°	23584	19782	19112
40°	20723	17752	17704
45°	17888	15608	16279
50°	15567	13687	14603
55°	13806	11887	12715
60°	12316	10046	10558
65°	11105	8150	8325
70°	9863	6104	4932
75°	8495	3550	2121
80°	6553	1261	639
85°	4210	425	425



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	5.0
10°-20°	229.3	13.9
20°-30°	324.3	19.7
30°-40°	341.7	20.8
40°-50°	290.4	17.7
50°-60°	209.1	12.7
60°-70°	120.6	7.3
70°-80°	41.3	2.5
80°-90°	5.7	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°	635.9	38.7
0°-40°	977.6	59.4
0°-60°	1477.1	89.8
0°-90°	1644.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1644.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	877	877	877	877	877	
5°	890	884	870	855	850	85
15°	886	858	808	773	760	249
25°	806	764	687	651	642	370
35°	626	590	526	506	508	390
45°	410	391	358	360	373	319
55°	257	236	221	229	236	231
65°	152	131	112	109	114	151
75°	71	54	30	19	18	75
85°	12	7	1	1	1	16
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°	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4
2.5°	885.7	886.9	885.7	885.7	884.5	883.3	882.1	880.9	878.6	876.2	876.2
5°	890.4	892.8	890.4	890.4	886.9	884.5	882.1	878.6	873.7	870.3	870.3
7.5°	894.0	894.0	894.0	890.4	888.0	884.5	878.6	872.5	866.6	860.7	858.3
10°	894.0	894.0	892.8	888.0	885.7	878.6	872.5	864.2	855.9	847.6	845.2
12.5°	890.4	891.6	889.2	884.5	878.6	870.3	861.8	851.2	841.7	832.2	827.4
15°	885.7	884.5	882.1	876.2	869.0	858.3	850.0	838.1	825.1	813.1	808.4
17.5°	873.7	873.7	870.3	864.2	854.7	842.9	829.8	816.7	802.4	789.4	783.4
20°	858.3	858.3	853.5	846.4	836.9	821.4	807.2	791.7	775.1	762.0	756.0
22.5°	835.7	836.9	831.0	822.7	811.9	794.1	779.9	760.8	744.2	728.8	724.0
25°	806.0	808.4	802.4	794.1	779.9	764.3	746.6	728.8	709.7	694.2	687.1
27.5°	771.6	772.8	766.7	758.4	744.2	727.6	709.7	690.7	672.9	656.2	649.1
30°	733.5	728.8	726.4	715.6	700.2	685.9	665.8	650.2	631.3	617.0	608.6
32.5°	680.0	682.4	675.3	667.0	655.0	638.4	621.8	603.9	586.1	575.4	569.5
35°	626.5	628.9	625.3	617.0	603.9	589.6	573.0	560.0	544.4	531.4	525.5
37.5°	570.6	570.6	568.3	563.5	553.9	540.9	524.3	511.2	498.1	487.4	483.8
40°	514.8	512.4	511.2	507.7	499.2	487.4	476.7	466.0	453.0	445.8	441.0
42.5°	460.1	460.1	457.7	454.2	445.8	439.8	429.1	417.3	407.8	400.7	400.7
45°	410.2	411.3	407.8	405.4	400.7	391.1	381.6	373.3	365.0	360.2	357.9
47.5°	366.2	366.2	362.6	360.2	355.5	347.2	338.8	331.6	325.7	322.2	321.0
50°	324.5	324.5	324.5	318.6	312.7	306.7	300.8	292.5	288.8	286.5	285.3
52.5°	288.8	287.6	287.6	282.9	277.0	269.8	263.9	256.8	253.2	250.9	252.0
55°	256.8	256.8	255.6	249.7	243.7	236.5	230.6	224.7	222.3	219.9	221.1
56°	243.7	243.7	242.6	237.7	230.6	224.7	217.5	211.6	208.0	209.2	209.2
57°	234.1	231.8	231.8	225.8	219.9	211.6	205.7	199.7	197.4	196.2	196.2
58°	222.3	221.1	219.9	214.0	208.0	200.9	195.0	189.1	185.4	185.4	184.2
59°	210.4	210.4	208.0	203.3	197.4	190.1	184.2	178.3	174.7	173.5	173.5
60°	199.7	200.9	197.4	192.6	187.9	179.5	172.3	167.6	164.0	162.9	162.9
61°	190.1	190.1	187.9	181.8	175.9	170.0	162.9	156.9	154.6	152.2	152.2
62°	181.8	179.5	178.3	172.3	166.4	159.3	153.4	147.4	143.9	141.5	142.7
63°	171.2	170.0	167.6	162.9	156.9	149.8	142.7	137.9	134.4	130.7	131.9
64°	162.9	161.7	158.1	153.4	147.4	140.3	133.2	128.3	126.0	122.4	121.2
65°	152.2	151.0	149.8	143.9	137.9	130.7	124.8	120.0	116.5	114.1	111.7
66°	142.7	143.9	141.5	136.8	129.5	123.6	115.3	110.5	108.2	104.6	102.2
67°	134.4	134.4	131.9	127.2	120.0	114.1	108.2	102.2	98.7	95.1	93.9
67.5°	129.5	129.5	127.2	121.2	116.5	109.4	103.4	98.7	93.9	91.6	89.2
68°	124.8	124.8	123.6	118.9	112.9	105.8	99.9	93.9	89.2	85.6	84.4
69°	116.5	117.7	115.3	110.5	104.6	97.5	91.6	86.8	82.1	78.4	76.0
70°	109.4	108.2	105.8	101.1	95.1	90.4	84.4	78.4	73.7	68.9	67.7
71°	99.9	99.9	97.5	93.9	88.0	82.1	76.0	71.3	66.5	60.6	59.4
72°	92.8	92.8	90.4	85.6	80.9	75.0	68.9	63.0	59.4	53.5	51.1
72.5°	88.0	89.2	86.8	82.1	77.2	70.1	65.4	60.6	54.7	49.9	47.6
73°	85.6	84.4	83.3	78.4	72.5	67.7	61.8	57.1	51.1	46.4	44.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	53.5	53.5	52.3	47.6	42.8	38.1	33.3	28.6	23.7	19.0	16.6
80°	36.9	38.1	35.7	33.3	29.8	24.9	20.2	16.6	11.9	9.5	7.1
82.5°	23.7	23.7	22.5	20.2	17.8	14.2	11.9	8.3	5.9	4.7	3.6
85°	11.9	13.1	11.9	10.7	8.3	7.1	5.9	3.6	2.4	1.2	1.2
87.5°	4.7	4.7	4.7	3.6	3.6	2.4	1.2	1.2	1.2	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°	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4	877.4
2.5°	873.7	873.7	871.3	870.3	869.0	867.8	866.6	865.4	865.4	866.6
5°	866.6	864.2	859.5	858.3	854.7	853.5	851.2	850.0	851.2	850.0
7.5°	855.9	851.2	845.2	842.9	838.1	835.7	832.2	832.2	829.8	831.0
10°	841.7	834.6	827.4	822.7	819.0	815.5	813.1	810.7	809.5	809.5
12.5°	823.9	815.5	808.4	801.2	795.3	792.9	788.2	788.2	785.8	784.6
15°	803.6	792.9	784.6	777.5	772.8	767.9	764.3	762.0	759.6	759.6
17.5°	777.5	767.9	759.6	751.3	744.2	740.6	737.1	733.5	733.5	731.1
20°	748.9	738.2	731.1	722.8	716.9	711.0	706.1	706.1	703.7	704.9
22.5°	716.9	703.7	696.6	690.7	684.8	680.0	675.3	675.3	674.1	672.9
25°	681.2	670.5	662.1	655.0	651.4	646.7	645.5	643.1	641.9	641.9
27.5°	643.1	634.8	624.1	620.6	615.8	613.5	613.5	612.3	609.9	611.1
30°	602.7	593.2	587.3	584.9	580.1	580.1	578.9	576.6	576.6	577.8
32.5°	563.5	553.9	549.2	548.0	543.3	543.3	542.1	543.3	543.3	544.4
35°	520.7	512.4	511.2	507.7	506.5	506.5	506.5	508.8	511.2	507.7
37.5°	480.3	474.3	470.8	469.6	470.8	470.8	472.0	475.5	474.3	473.1
40°	438.6	433.9	431.5	431.5	433.9	436.3	436.3	439.8	441.0	439.8
42.5°	397.0	393.4	393.4	394.6	397.0	398.3	401.9	405.4	406.6	407.8
45°	357.9	357.9	357.9	359.0	360.2	362.6	367.3	370.9	372.1	373.3
47.5°	319.8	318.6	322.2	323.3	326.9	328.1	331.6	336.4	337.6	338.8
50°	284.1	286.5	287.6	291.2	293.7	293.7	298.4	300.8	304.4	304.4
52.5°	250.9	254.4	255.6	259.2	260.4	261.5	263.9	267.5	269.8	269.8
55°	221.1	222.3	224.7	225.8	229.4	230.6	233.0	234.1	237.7	236.5
56°	208.0	210.4	211.6	214.0	216.4	217.5	219.9	221.1	223.5	224.7
57°	196.2	197.4	200.9	202.1	204.5	204.5	205.7	209.2	209.2	210.4
58°	184.2	186.7	187.9	189.1	191.4	192.6	195.0	196.2	197.4	196.2
59°	173.5	174.7	175.9	175.9	178.3	178.3	181.8	184.2	185.4	185.4
60°	162.9	162.9	164.0	165.2	167.6	168.8	168.8	171.2	171.2	171.2
61°	152.2	152.2	153.4	154.6	155.7	155.7	158.1	158.1	159.3	160.5
62°	142.7	141.5	141.5	142.7	142.7	145.1	146.2	147.4	148.6	147.4
63°	131.9	130.7	130.7	130.7	130.7	133.2	133.2	134.4	136.8	135.6
64°	120.0	120.0	120.0	120.0	121.2	121.2	123.6	124.8	126.0	127.2
65°	111.7	109.4	108.2	108.2	109.4	110.5	111.7	112.9	114.1	114.1
66°	102.2	99.9	98.7	98.7	98.7	98.7	101.1	101.1	103.4	103.4
67°	91.6	89.2	88.0	86.8	86.8	86.8	90.4	89.2	89.2	89.2
67.5°	88.0	84.4	83.3	82.1	80.9	83.3	82.1	83.3	83.3	82.1
68°	83.3	80.9	78.4	76.0	76.0	76.0	77.2	78.4	77.2	76.0
69°	73.7	72.5	68.9	66.5	65.4	66.5	65.4	66.5	65.4	66.5
70°	65.4	61.8	58.2	57.1	55.9	55.9	55.9	54.7	55.9	54.7
71°	57.1	53.5	49.9	47.6	46.4	46.4	45.2	46.4	45.2	46.4
72°	48.7	45.2	40.4	38.1	38.1	38.1	38.1	36.9	38.1	36.9
72.5°	45.2	40.4	36.9	34.5	33.3	33.3	33.3	33.3	32.1	33.3
73°	41.6	36.9	32.1	31.0	31.0	31.0	29.8	28.6	29.8	29.8



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	14.2	10.7	9.5	9.5	9.5	9.5	9.5	9.5	8.3	8.3
80°	5.9	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	77.2	77.2	75.0	71.3	65.4	59.4	54.7	49.9	44.0	38.1	35.7
75°	71.3	70.1	67.7	64.2	59.4	53.5	48.7	42.8	38.1	32.1	29.8





74°	34.5	28.6	26.1	23.7	23.7	23.7	22.5	22.5	22.5	23.7
75°	27.4	22.5	20.2	17.8	19.0	17.8	19.0	17.8	17.8	17.8



(END OF REPORT)