

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: P583873

Luminaire Tested: **HC815D010-HM80520835-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583873
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-HM80520835-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1530.8 lumens
Efficiency: N/A
Efficacy: 109.3 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

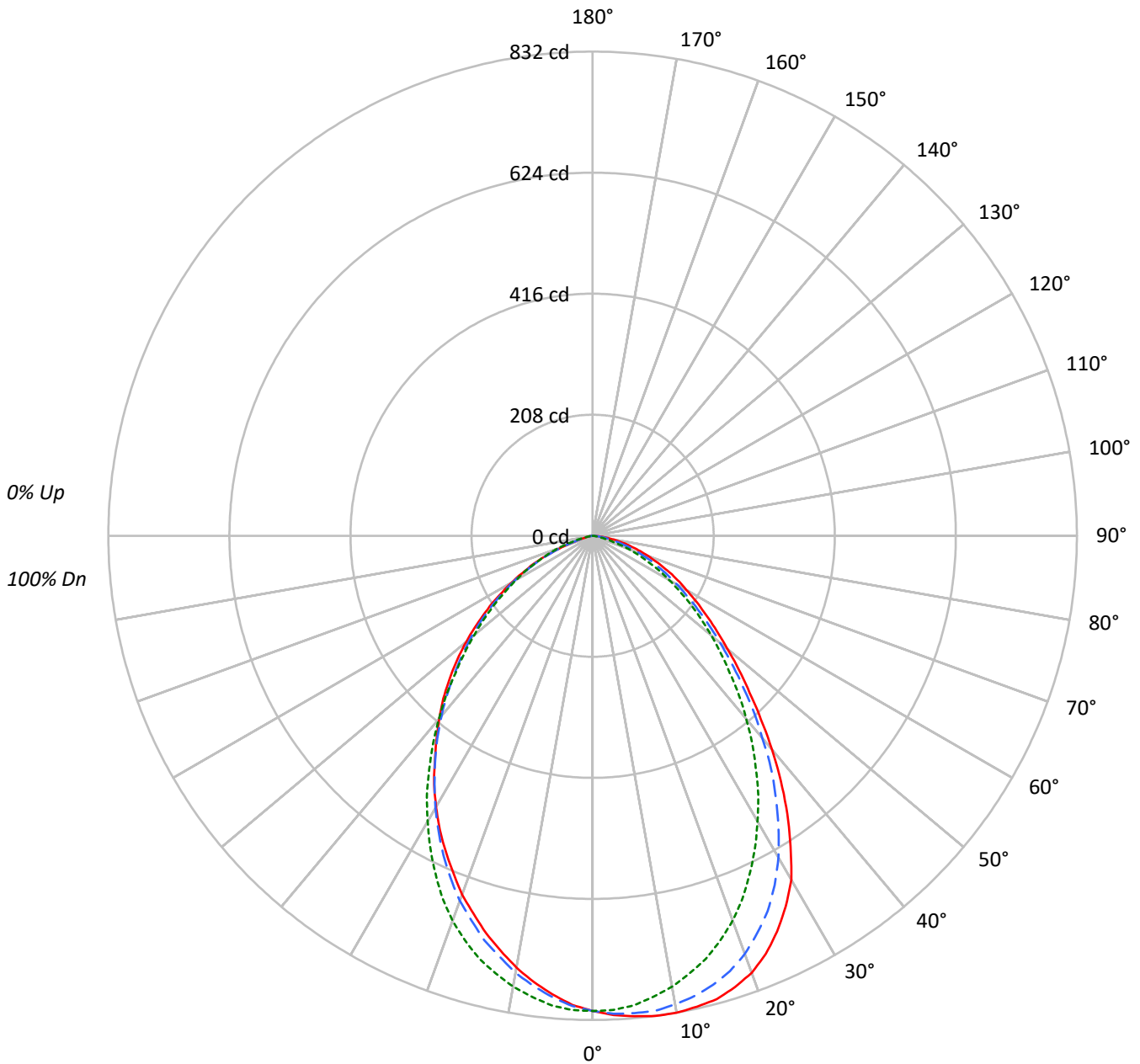
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	25181	25181	25181
5°	25655	25073	24488
10°	26055	24633	23594
15°	26315	24020	22574
20°	26216	23092	21530
25°	25525	21758	20333
30°	24312	20171	19149
35°	21950	18412	17787
40°	19286	16524	16476
45°	16646	14526	15150
50°	14493	12742	13591
55°	12849	11064	11838
60°	11465	9350	9824
65°	10332	7588	7756
70°	9178	5680	4589
75°	7911	3300	1978
80°	6091	1172	604
85°	3927	389	389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	5.0
10°-20°	213.4	13.9
20°-30°	301.8	19.7
30°-40°	318.0	20.8
40°-50°	270.3	17.7
50°-60°	194.6	12.7
60°-70°	112.3	7.3
70°-80°	38.4	2.5
80°-90°	5.3	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°	591.9	38.7
0°-40°	909.9	59.4
0°-60°	1374.8	89.8
0°-90°	1530.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1530.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	817	817	817	817	817	
5°	829	823	810	796	791	79
15°	824	799	752	719	707	232
25°	750	711	640	606	598	344
35°	583	549	489	471	472	363
45°	382	364	333	335	347	297
55°	239	220	206	214	220	215
65°	142	122	104	102	106	141
75°	66	50	28	18	17	70
85°	11	7	1	1	1	15
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°	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6
2.5°	824.3	825.4	824.3	824.3	823.3	822.2	821.0	819.9	817.7	815.4	815.4
5°	828.8	831.0	828.8	828.8	825.4	823.3	821.0	817.7	813.3	810.0	810.0
7.5°	832.1	832.1	832.1	828.8	826.5	823.3	817.7	812.2	806.6	801.1	798.9
10°	832.1	832.1	831.0	826.5	824.3	817.7	812.2	804.5	796.6	788.9	786.7
12.5°	828.8	829.9	827.6	823.3	817.7	810.0	802.2	792.3	783.4	774.6	770.1
15°	824.3	823.3	821.0	815.4	808.8	798.9	791.1	780.1	767.9	756.9	752.4
17.5°	813.3	813.3	810.0	804.5	795.5	784.5	772.3	760.1	746.9	734.7	729.1
20°	798.9	798.9	794.5	787.8	778.9	764.6	751.3	736.9	721.4	709.3	703.7
22.5°	777.8	778.9	773.5	765.7	755.8	739.1	725.9	708.2	692.6	678.3	673.8
25°	750.2	752.4	746.9	739.1	725.9	711.4	694.9	678.3	660.6	646.2	639.5
27.5°	718.1	719.3	713.7	705.9	692.6	677.2	660.6	642.9	626.2	610.8	604.2
30°	682.8	678.3	676.0	666.1	651.7	638.4	619.6	605.3	587.6	574.3	566.5
32.5°	632.9	635.2	628.5	620.7	609.7	594.2	578.6	562.1	545.5	535.5	530.0
35°	583.1	585.4	582.0	574.3	562.1	548.8	533.3	521.2	506.8	494.7	489.1
37.5°	531.2	531.2	528.9	524.4	515.6	503.4	487.9	475.7	463.6	453.7	450.3
40°	479.1	476.9	475.7	472.5	464.8	453.7	443.7	433.8	421.6	414.9	410.5
42.5°	428.3	428.3	426.0	422.7	414.9	409.3	399.5	388.4	379.6	372.8	372.8
45°	381.7	382.8	379.6	377.3	372.8	364.0	355.2	347.4	339.7	335.2	333.1
47.5°	340.8	340.8	337.5	335.2	330.9	323.1	315.3	308.7	303.2	299.8	298.7
50°	302.1	302.1	302.1	296.6	291.0	285.5	279.9	272.2	268.8	266.7	265.6
52.5°	268.8	267.8	267.8	263.3	257.9	251.1	245.6	239.0	235.7	233.4	234.6
55°	239.0	239.0	237.9	232.3	226.8	220.2	214.6	209.1	206.9	204.7	205.8
56°	226.8	226.8	225.7	221.2	214.6	209.1	202.4	196.9	193.6	194.7	194.7
57°	218.0	215.8	215.8	210.3	204.7	196.9	191.5	185.9	183.6	182.6	182.6
58°	206.9	205.8	204.7	199.2	193.6	187.0	181.5	175.9	172.6	172.6	171.5
59°	195.8	195.8	193.6	189.2	183.6	177.0	171.5	165.9	162.7	161.6	161.6
60°	185.9	187.0	183.6	179.3	174.8	167.1	160.4	156.0	152.7	151.6	151.6
61°	177.0	177.0	174.8	169.3	163.8	158.2	151.6	146.0	143.9	141.6	141.6
62°	169.3	167.1	165.9	160.4	155.0	148.2	142.8	137.2	133.9	131.7	132.8
63°	159.3	158.2	156.0	151.6	146.0	139.4	132.8	128.3	125.1	121.7	122.8
64°	151.6	150.5	147.1	142.8	137.2	130.6	123.9	119.5	117.2	114.0	112.9
65°	141.6	140.5	139.4	133.9	128.3	121.7	116.2	111.7	108.4	106.3	104.0
66°	132.8	133.9	131.7	127.2	120.6	115.1	107.4	102.9	100.7	97.4	95.2
67°	125.1	125.1	122.8	118.5	111.7	106.3	100.7	95.2	91.8	88.6	87.4
67.5°	120.6	120.6	118.5	112.9	108.4	101.8	96.3	91.8	87.4	85.2	83.0
68°	116.2	116.2	115.1	110.6	105.1	98.4	92.9	87.4	83.0	79.7	78.6
69°	108.4	109.5	107.4	102.9	97.4	90.7	85.2	80.7	76.4	73.0	70.9
70°	101.8	100.7	98.4	94.1	88.6	84.1	78.6	73.0	68.6	64.2	63.0
71°	92.9	92.9	90.7	87.4	81.8	76.4	70.9	66.4	61.9	56.4	55.3
72°	86.3	86.3	84.1	79.7	75.2	69.6	64.2	58.7	55.3	49.8	47.6
72.5°	81.8	83.0	80.7	76.4	71.9	65.3	60.9	56.4	50.9	46.5	44.2
73°	79.7	78.6	77.5	73.0	67.5	63.0	57.5	53.1	47.6	43.1	41.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	49.8	49.8	48.7	44.2	39.9	35.4	31.0	26.5	22.2	17.7	15.5
80°	34.3	35.4	33.1	31.0	27.7	23.3	18.8	15.5	11.1	8.8	6.6
82.5°	22.2	22.2	21.0	18.8	16.6	13.3	11.1	7.7	5.5	4.5	3.4
85°	11.1	12.2	11.1	10.0	7.7	6.6	5.5	3.4	2.2	1.1	1.1
87.5°	4.5	4.5	4.5	3.4	3.4	2.2	1.1	1.1	1.1	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°	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6	816.6
2.5°	813.3	813.3	811.1	810.0	808.8	807.7	806.6	805.5	805.5	806.6
5°	806.6	804.5	800.0	798.9	795.5	794.5	792.3	791.1	792.3	791.1
7.5°	796.6	792.3	786.7	784.5	780.1	777.8	774.6	774.6	772.3	773.5
10°	783.4	776.7	770.1	765.7	762.4	759.0	756.9	754.6	753.5	753.5
12.5°	766.7	759.0	752.4	745.8	740.2	738.1	733.6	733.6	731.4	730.2
15°	747.9	738.1	730.2	723.6	719.3	714.8	711.4	709.3	707.1	707.1
17.5°	723.6	714.8	707.1	699.3	692.6	689.4	686.0	682.8	682.8	680.5
20°	697.1	687.1	680.5	672.8	667.2	661.7	657.2	657.2	655.0	656.1
22.5°	667.2	655.0	648.4	642.9	637.3	632.9	628.5	628.5	627.3	626.2
25°	634.1	624.1	616.4	609.7	606.4	601.9	600.8	598.6	597.6	597.6
27.5°	598.6	590.8	580.9	577.6	573.1	570.9	570.9	569.8	567.7	568.8
30°	560.9	552.1	546.6	544.4	540.0	540.0	538.9	536.6	536.6	537.8
32.5°	524.4	515.6	511.2	510.1	505.6	505.6	504.5	505.6	505.6	506.8
35°	484.7	476.9	475.7	472.5	471.4	471.4	471.4	473.6	475.7	472.5
37.5°	447.1	441.5	438.1	437.1	438.1	438.1	439.2	442.6	441.5	440.4
40°	408.3	403.9	401.6	401.6	403.9	406.1	406.1	409.3	410.5	409.3
42.5°	369.6	366.2	366.2	367.4	369.6	370.7	374.0	377.3	378.4	379.6
45°	333.1	333.1	333.1	334.1	335.2	337.5	341.9	345.2	346.3	347.4
47.5°	297.6	296.6	299.8	301.0	304.3	305.3	308.7	313.2	314.3	315.3
50°	264.5	266.7	267.8	271.1	273.3	273.3	277.8	279.9	283.3	283.3
52.5°	233.4	236.8	237.9	241.2	242.3	243.4	245.6	249.0	251.1	251.1
55°	205.8	206.9	209.1	210.3	213.5	214.6	216.9	218.0	221.2	220.2
56°	193.6	195.8	196.9	199.2	201.4	202.4	204.7	205.8	208.0	209.1
57°	182.6	183.6	187.0	188.1	190.3	190.3	191.5	194.7	194.7	195.8
58°	171.5	173.8	174.8	175.9	178.1	179.3	181.5	182.6	183.6	182.6
59°	161.6	162.7	163.8	163.8	165.9	165.9	169.3	171.5	172.6	172.6
60°	151.6	151.6	152.7	153.8	156.0	157.1	157.1	159.3	159.3	159.3
61°	141.6	141.6	142.8	143.9	145.0	145.0	147.1	147.1	148.2	149.4
62°	132.8	131.7	131.7	132.8	132.8	135.0	136.0	137.2	138.3	137.2
63°	122.8	121.7	121.7	121.7	121.7	123.9	123.9	125.1	127.2	126.2
64°	111.7	111.7	111.7	111.7	112.9	112.9	115.1	116.2	117.2	118.5
65°	104.0	101.8	100.7	100.7	101.8	102.9	104.0	105.1	106.3	106.3
66°	95.2	92.9	91.8	91.8	91.8	91.8	94.1	94.1	96.3	96.3
67°	85.2	83.0	81.8	80.7	80.7	80.7	84.1	83.0	83.0	83.0
67.5°	81.8	78.6	77.5	76.4	75.2	77.5	76.4	77.5	77.5	76.4
68°	77.5	75.2	73.0	70.9	70.9	70.9	71.9	73.0	71.9	70.9
69°	68.6	67.5	64.2	61.9	60.9	61.9	60.9	61.9	60.9	61.9
70°	60.9	57.5	54.2	53.1	52.1	52.1	52.1	50.9	52.1	50.9
71°	53.1	49.8	46.5	44.2	43.1	43.1	42.1	43.1	42.1	43.1
72°	45.3	42.1	37.6	35.4	35.4	35.4	35.4	34.3	35.4	34.3
72.5°	42.1	37.6	34.3	32.1	31.0	31.0	31.0	31.0	29.9	31.0
73°	38.7	34.3	29.9	28.8	28.8	28.8	27.7	26.5	27.7	27.7



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	13.3	10.0	8.8	8.8	8.8	8.8	8.8	8.8	7.7	7.7
80°	5.5	4.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
82.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	71.9	71.9	69.6	66.4	60.9	55.3	50.9	46.5	41.0	35.4	33.1
75°	66.4	65.3	63.0	59.8	55.3	49.8	45.3	39.9	35.4	29.9	27.7





74°	32.1	26.5	24.3	22.2	22.2	22.2	21.0	21.0	21.0	22.2
75°	25.4	21.0	18.8	16.6	17.7	16.6	17.7	16.6	16.6	16.6



(END OF REPORT)