

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: P583856

Luminaire Tested: **HC815D010-HM80520830-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583856
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-HM80520830-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1471.5 lumens
Efficiency: N/A
Efficacy: 105.1 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

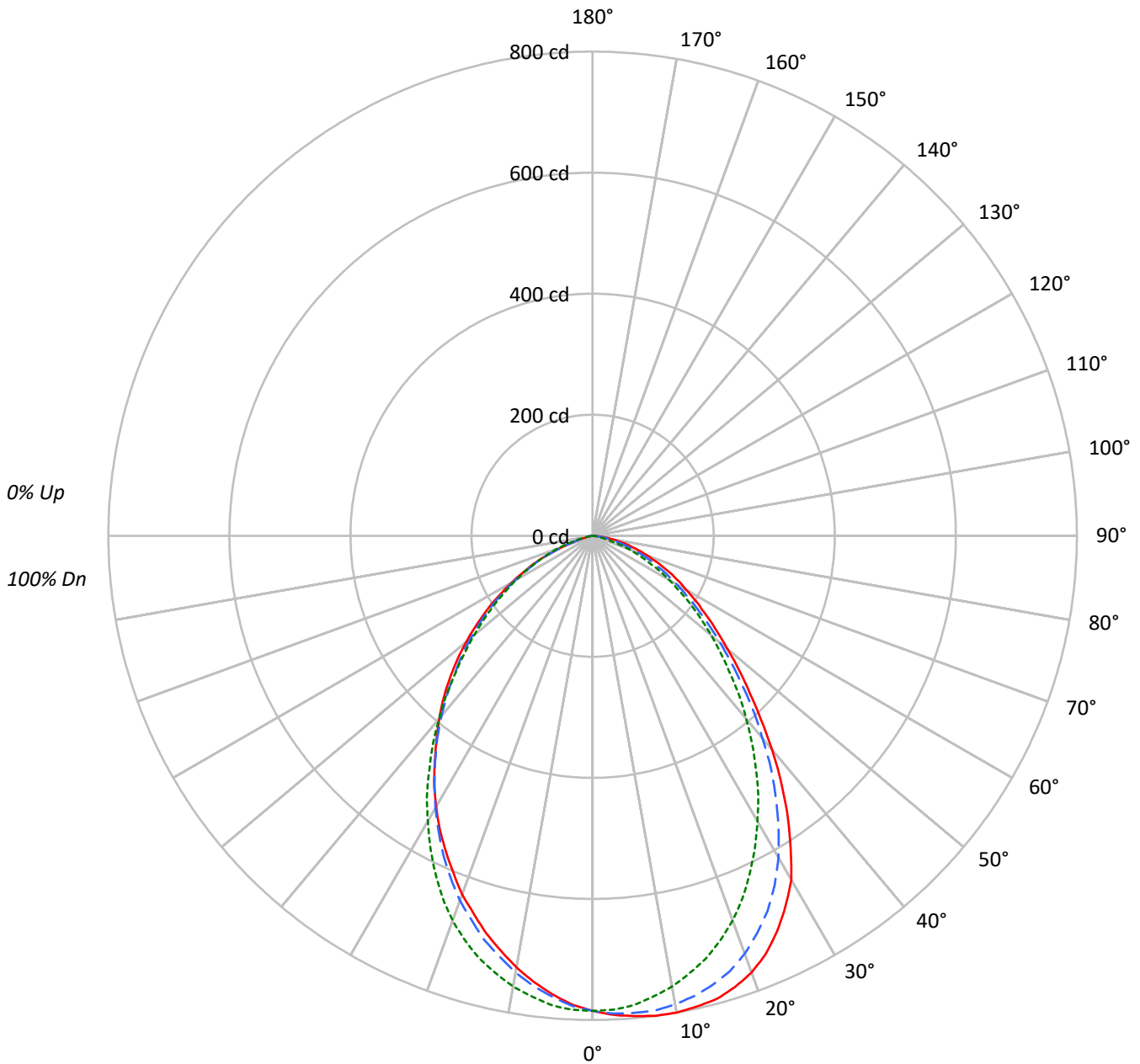
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	24203	24203	24203
5°	24658	24101	23541
10°	25046	23681	22679
15°	25297	23088	21696
20°	25199	22200	20697
25°	24535	20918	19540
30°	23365	19388	18405
35°	21103	17697	17098
40°	18541	15884	15844
45°	16000	13964	14565
50°	13931	12243	13063
55°	12354	10639	11376
60°	11021	8986	9448
65°	9938	7296	7450
70°	8818	5464	4409
75°	7613	3169	1894
80°	5860	1137	550
85°	3750	389	389



TEST NUMBER: P583856

CATALOG NUMBER: HC815D010-HM80520830-81RWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	5.0
10°-20°	205.1	13.9
20°-30°	290.1	19.7
30°-40°	305.7	20.8
40°-50°	259.8	17.7
50°-60°	187.1	12.7
60°-70°	107.9	7.3
70°-80°	36.9	2.5
80°-90°	5.1	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°	568.9	38.7
0°-40°	874.6	59.4
0°-60°	1321.6	89.8
0°-90°	1471.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1471.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	785	785	785	785	785	
5°	797	791	779	765	760	76
15°	792	768	723	691	680	223
25°	721	684	615	583	574	331
35°	561	528	470	453	454	349
45°	367	350	320	322	334	285
55°	230	212	198	205	212	207
65°	136	117	100	98	102	135
75°	64	48	27	17	16	67
85°	11	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°	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9
2.5°	792.4	793.5	792.4	792.4	791.3	790.2	789.2	788.1	786.0	783.9	783.9
5°	796.6	798.8	796.6	796.6	793.5	791.3	789.2	786.0	781.7	778.6	778.6
7.5°	799.9	799.9	799.9	796.6	794.5	791.3	786.0	780.7	775.4	770.0	767.9
10°	799.9	799.9	798.8	794.5	792.4	786.0	780.7	773.2	765.8	758.3	756.3
12.5°	796.6	797.7	795.5	791.3	786.0	778.6	771.1	761.6	753.0	744.6	740.2
15°	792.4	791.3	789.2	783.9	777.5	767.9	760.5	749.9	738.2	727.5	723.2
17.5°	781.7	781.7	778.6	773.2	764.7	754.1	742.4	730.7	717.9	706.3	700.9
20°	767.9	767.9	763.6	757.2	748.8	734.9	722.2	708.3	693.5	681.8	676.5
22.5°	747.7	748.8	743.5	736.0	726.4	710.5	697.7	680.7	665.8	652.0	647.7
25°	721.1	723.2	717.9	710.5	697.7	683.8	667.9	652.0	634.9	621.2	614.8
27.5°	690.2	691.3	686.0	678.5	665.8	650.9	634.9	617.9	602.0	587.1	580.7
30°	656.2	652.0	649.9	640.3	626.5	613.7	595.6	581.8	564.8	552.0	544.5
32.5°	608.4	610.5	604.1	596.7	586.0	571.2	556.2	540.3	524.3	514.8	509.5
35°	560.6	562.6	559.5	552.0	540.3	527.5	512.6	500.9	487.2	475.4	470.1
37.5°	510.6	510.6	508.4	504.2	495.6	483.9	469.0	457.3	445.6	436.1	432.8
40°	460.6	458.4	457.3	454.2	446.7	436.1	426.4	416.9	405.2	398.9	394.6
42.5°	411.6	411.6	409.5	406.3	398.9	393.6	383.9	373.3	364.8	358.5	358.5
45°	366.9	368.0	364.8	362.7	358.5	349.9	341.4	334.0	326.6	322.2	320.2
47.5°	327.6	327.6	324.4	322.2	318.0	310.5	303.2	296.8	291.4	288.2	287.2
50°	290.4	290.4	290.4	285.0	279.7	274.4	269.1	261.6	258.5	256.3	255.2
52.5°	258.5	257.4	257.4	253.2	247.9	241.5	236.1	229.8	226.5	224.4	225.5
55°	229.8	229.8	228.7	223.4	218.0	211.6	206.3	201.0	198.9	196.8	197.9
56°	218.0	218.0	217.0	212.7	206.3	201.0	194.6	189.3	186.2	187.1	187.1
57°	209.5	207.4	207.4	202.1	196.8	189.3	184.0	178.7	176.5	175.4	175.4
58°	198.9	197.9	196.8	191.5	186.2	179.8	174.5	169.1	165.9	165.9	164.8
59°	188.2	188.2	186.2	181.8	176.5	170.1	164.8	159.5	156.3	155.3	155.3
60°	178.7	179.8	176.5	172.3	168.1	160.6	154.2	150.0	146.8	145.7	145.7
61°	170.1	170.1	168.1	162.7	157.4	152.1	145.7	140.4	138.2	136.2	136.2
62°	162.7	160.6	159.5	154.2	148.9	142.6	137.2	131.8	128.7	126.5	127.6
63°	153.2	152.1	150.0	145.7	140.4	134.0	127.6	123.4	120.1	117.0	118.1
64°	145.7	144.6	141.5	137.2	131.8	125.6	119.2	114.8	112.8	109.5	108.4
65°	136.2	135.1	134.0	128.7	123.4	117.0	111.7	107.4	104.2	102.1	100.0
66°	127.6	128.7	126.5	122.3	115.9	110.6	103.1	98.9	96.8	93.6	91.5
67°	120.1	120.1	118.1	113.8	107.4	102.1	96.8	91.5	88.3	85.1	84.0
67.5°	115.9	115.9	113.8	108.4	104.2	97.8	92.5	88.3	84.0	81.9	79.8
68°	111.7	111.7	110.6	106.4	101.1	94.7	89.3	84.0	79.8	76.6	75.6
69°	104.2	105.3	103.1	98.9	93.6	87.2	81.9	77.6	73.4	70.3	68.1
70°	97.8	96.8	94.7	90.4	85.1	80.9	75.6	70.3	65.9	61.7	60.6
71°	89.3	89.3	87.2	84.0	78.7	73.4	68.1	63.9	59.5	54.2	53.1
72°	82.9	82.9	80.9	76.6	72.3	67.0	61.7	56.4	53.1	47.8	45.8
72.5°	78.7	79.8	77.6	73.4	69.2	62.8	58.4	54.2	48.9	44.7	42.5
73°	76.6	75.6	74.5	70.3	64.8	60.6	55.3	51.1	45.8	41.5	39.4



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CATALOG NUMBER: HC815D010-HM80520830-81RWWH

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	47.8	47.8	46.8	42.5	38.3	34.0	29.8	25.5	21.3	17.0	14.9
80°	33.0	34.0	31.9	29.8	26.6	22.3	18.1	14.9	10.6	8.6	6.4
82.5°	21.3	21.3	20.2	18.1	15.9	12.8	10.6	7.5	5.3	4.2	3.1
85°	10.6	11.7	10.6	9.5	7.5	6.4	5.3	3.1	2.2	1.1	1.1
87.5°	4.2	4.2	4.2	3.1	3.1	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°	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9	784.9
2.5°	781.7	781.7	779.6	778.6	777.5	776.4	775.4	774.3	774.3	775.4
5°	775.4	773.2	769.0	767.9	764.7	763.6	761.6	760.5	761.6	760.5
7.5°	765.8	761.6	756.3	754.1	749.9	747.7	744.6	744.6	742.4	743.5
10°	753.0	746.6	740.2	736.0	732.8	729.6	727.5	725.4	724.3	724.3
12.5°	737.1	729.6	723.2	716.9	711.6	709.4	705.2	705.2	703.0	701.9
15°	719.0	709.4	701.9	695.6	691.3	687.1	683.8	681.8	679.6	679.6
17.5°	695.6	687.1	679.6	672.1	665.8	662.6	659.4	656.2	656.2	654.1
20°	670.1	660.5	654.1	646.6	641.3	636.0	631.8	631.8	629.6	630.7
22.5°	641.3	629.6	623.2	617.9	612.6	608.4	604.1	604.1	603.1	602.0
25°	609.5	599.8	592.4	586.0	582.9	578.6	577.6	575.4	574.3	574.3
27.5°	575.4	567.9	558.4	555.1	550.9	548.8	548.8	547.8	545.6	546.7
30°	539.2	530.7	525.4	523.3	519.0	519.0	517.9	515.9	515.9	516.9
32.5°	504.2	495.6	491.4	490.3	486.1	486.1	485.0	486.1	486.1	487.2
35°	465.9	458.4	457.3	454.2	453.1	453.1	453.1	455.2	457.3	454.2
37.5°	429.7	424.4	421.1	420.1	421.1	421.1	422.2	425.5	424.4	423.3
40°	392.5	388.3	386.1	386.1	388.3	390.3	390.3	393.6	394.6	393.6
42.5°	355.2	352.1	352.1	353.1	355.2	356.3	359.5	362.7	363.8	364.8
45°	320.2	320.2	320.2	321.3	322.2	324.4	328.6	331.9	332.9	334.0
47.5°	286.1	285.0	288.2	289.3	292.5	293.5	296.8	301.0	302.1	303.2
50°	254.3	256.3	257.4	260.5	262.7	262.7	266.9	269.1	272.3	272.3
52.5°	224.4	227.6	228.7	231.8	232.9	234.0	236.1	239.3	241.5	241.5
55°	197.9	198.9	201.0	202.1	205.3	206.3	208.5	209.5	212.7	211.6
56°	186.2	188.2	189.3	191.5	193.5	194.6	196.8	197.9	199.9	201.0
57°	175.4	176.5	179.8	180.9	182.9	182.9	184.0	187.1	187.1	188.2
58°	164.8	167.0	168.1	169.1	171.2	172.3	174.5	175.4	176.5	175.4
59°	155.3	156.3	157.4	157.4	159.5	159.5	162.7	164.8	165.9	165.9
60°	145.7	145.7	146.8	147.9	150.0	151.0	151.0	153.2	153.2	153.2
61°	136.2	136.2	137.2	138.2	139.3	139.3	141.5	141.5	142.6	143.6
62°	127.6	126.5	126.5	127.6	127.6	129.8	130.9	131.8	132.9	131.8
63°	118.1	117.0	117.0	117.0	117.0	119.2	119.2	120.1	122.3	121.2
64°	107.4	107.4	107.4	107.4	108.4	108.4	110.6	111.7	112.8	113.8
65°	100.0	97.8	96.8	96.8	97.8	98.9	100.0	101.1	102.1	102.1
66°	91.5	89.3	88.3	88.3	88.3	88.3	90.4	90.4	92.5	92.5
67°	81.9	79.8	78.7	77.6	77.6	77.6	80.9	79.8	79.8	79.8
67.5°	78.7	75.6	74.5	73.4	72.3	74.5	73.4	74.5	74.5	73.4
68°	74.5	72.3	70.3	68.1	68.1	68.1	69.2	70.3	69.2	68.1
69°	65.9	64.8	61.7	59.5	58.4	59.5	58.4	59.5	58.4	59.5
70°	58.4	55.3	52.1	51.1	50.0	50.0	50.0	48.9	50.0	48.9
71°	51.1	47.8	44.7	42.5	41.5	41.5	40.4	41.5	40.4	41.5
72°	43.6	40.4	36.2	34.0	34.0	34.0	34.0	33.0	34.0	33.0
72.5°	40.4	36.2	33.0	30.8	29.8	29.8	29.8	29.8	28.7	29.8
73°	37.2	33.0	28.7	27.6	27.6	27.6	26.6	25.5	26.6	26.6



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	12.8	9.5	8.6	8.6	8.6	8.6	8.6	8.6	7.5	7.5
80°	5.3	4.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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°	69.2	69.2	67.0	63.9	58.4	53.1	48.9	44.7	39.4	34.0	31.9
75°	63.9	62.8	60.6	57.5	53.1	47.8	43.6	38.3	34.0	28.7	26.6





74°	30.8	25.5	23.4	21.3	21.3	21.3	20.2	20.2	20.2	21.3
75°	24.5	20.2	18.1	15.9	17.0	15.9	17.0	15.9	15.9	15.9



(END OF REPORT)