

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: P583771

Luminaire Tested: **HC810D010-HM80520927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583771
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: HC810D010-HM80520927-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 875.1 lumens
Efficiency: N/A
Efficacy: 88.4 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

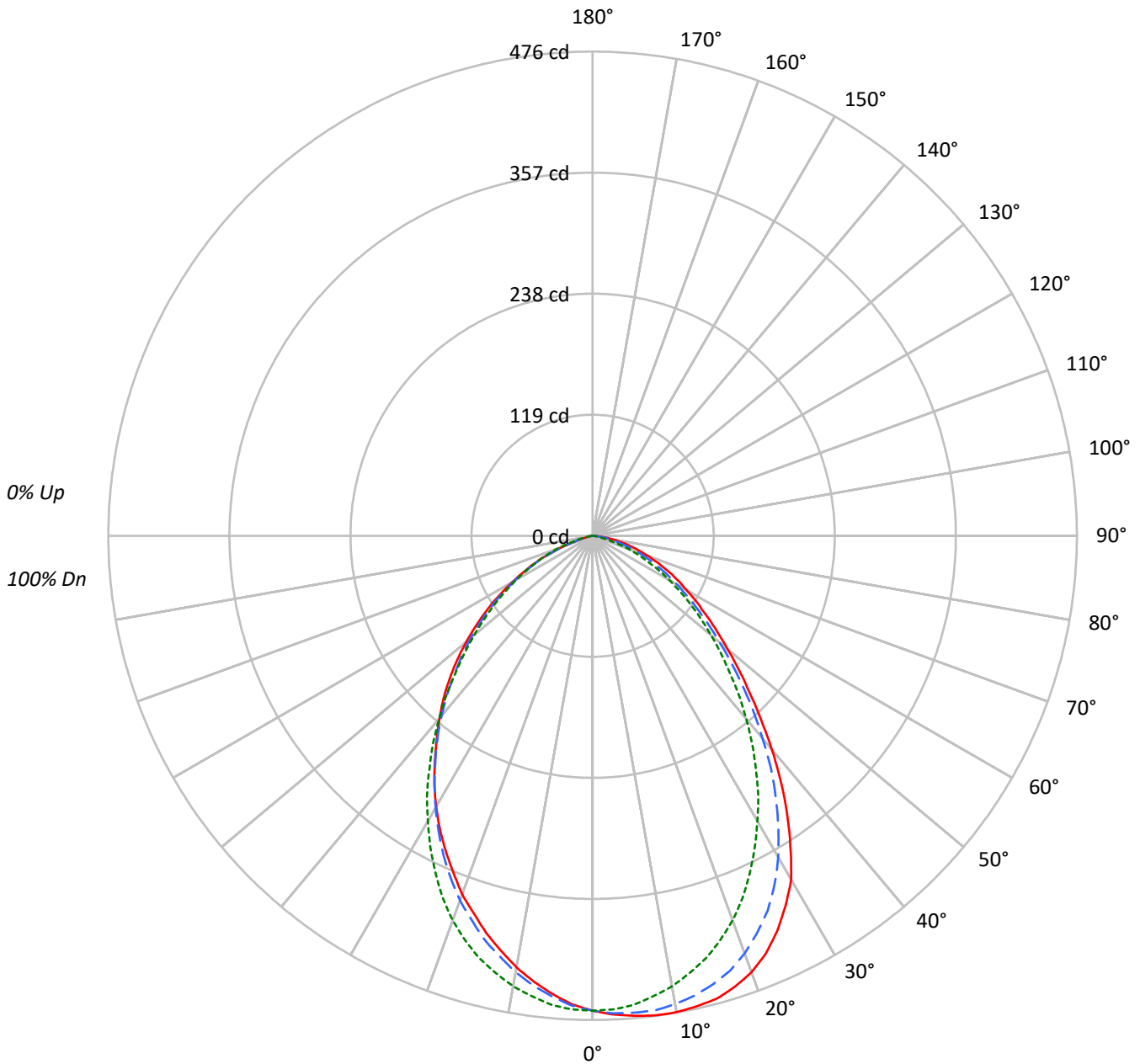
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	14397	14397	14397
5°	14663	14332	13997
10°	14892	14081	13489
15°	15043	13731	12904
20°	14983	13202	12306
25°	14593	12439	11623
30°	13897	11529	10946
35°	12547	10525	10168
40°	11026	9444	9419
45°	9516	8303	8661
50°	8285	7282	7767
55°	7349	6328	6763
60°	6556	5347	5618
65°	5910	4341	4429
70°	5247	3255	2624
75°	4527	1894	1132
80°	3481	675	337
85°	2264	212	212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.8	5.0
10°-20°	122.0	13.9
20°-30°	172.5	19.7
30°-40°	181.8	20.8
40°-50°	154.5	17.7
50°-60°	111.3	12.7
60°-70°	64.2	7.3
70°-80°	21.9	2.5
80°-90°	3.0	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°	338.3	38.7
0°-40°	520.2	59.4
0°-60°	785.9	89.8
0°-90°	875.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	875.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	467	467	467	467	467	
5°	474	471	463	455	452	45
15°	471	457	430	411	404	133
25°	429	407	366	347	342	197
35°	333	314	280	270	270	208
45°	218	208	190	192	199	170
55°	137	126	118	122	126	123
65°	81	70	60	58	61	81
75°	38	28	16	10	10	40
85°	6	4	1	1	1	9
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°	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9
2.5°	471.2	471.9	471.2	471.2	470.6	470.0	469.4	468.7	467.5	466.1	466.1
5°	473.7	475.0	473.7	473.7	471.9	470.6	469.4	467.5	464.9	463.0	463.0
7.5°	475.6	475.6	475.6	473.7	472.5	470.6	467.5	464.2	461.1	458.0	456.6
10°	475.6	475.6	475.0	472.5	471.2	467.5	464.2	459.9	455.4	451.0	449.7
12.5°	473.7	474.4	473.1	470.6	467.5	463.0	458.6	452.9	447.9	442.8	440.2
15°	471.2	470.6	469.4	466.1	462.4	456.6	452.2	445.9	439.0	432.6	430.1
17.5°	464.9	464.9	463.0	459.9	454.8	448.5	441.5	434.5	427.0	420.0	416.9
20°	456.6	456.6	454.1	450.4	445.3	437.0	429.5	421.3	412.4	405.4	402.3
22.5°	444.6	445.3	442.1	437.6	432.0	422.5	414.9	404.8	395.9	387.8	385.2
25°	428.9	430.1	427.0	422.5	414.9	406.8	397.3	387.8	377.7	369.4	365.6
27.5°	410.5	411.1	408.0	403.5	395.9	387.0	377.7	367.5	358.0	349.2	345.3
30°	390.3	387.8	386.4	380.8	372.5	364.9	354.2	345.9	335.8	328.3	323.8
32.5°	361.8	363.1	359.3	354.8	348.5	339.7	330.8	321.3	311.8	306.1	303.0
35°	333.3	334.6	332.7	328.3	321.3	313.7	304.8	297.9	289.7	282.7	279.6
37.5°	303.6	303.6	302.3	299.8	294.7	287.8	279.0	272.0	265.0	259.4	257.5
40°	273.9	272.6	272.0	270.1	265.6	259.4	253.6	248.0	241.0	237.2	234.6
42.5°	244.7	244.7	243.5	241.6	237.2	234.0	228.4	222.0	217.0	213.1	213.1
45°	218.2	218.9	217.0	215.6	213.1	208.1	203.0	198.6	194.1	191.6	190.4
47.5°	194.8	194.8	192.9	191.6	189.1	184.7	180.3	176.5	173.3	171.4	170.8
50°	172.7	172.7	172.7	169.5	166.4	163.2	160.0	155.7	153.7	152.4	151.8
52.5°	153.7	153.0	153.0	150.5	147.4	143.6	140.4	136.7	134.7	133.4	134.1
55°	136.7	136.7	135.9	132.8	129.7	125.8	122.7	119.6	118.3	117.1	117.7
56°	129.7	129.7	129.0	126.5	122.7	119.6	115.8	112.6	110.7	111.3	111.3
57°	124.6	123.3	123.3	120.2	117.1	112.6	109.4	106.3	105.1	104.3	104.3
58°	118.3	117.7	117.1	113.8	110.7	106.9	103.7	100.6	98.7	98.7	98.1
59°	111.9	111.9	110.7	108.2	105.1	101.2	98.1	94.8	93.0	92.3	92.3
60°	106.3	106.9	105.1	102.4	99.9	95.6	91.7	89.2	87.3	86.7	86.7
61°	101.2	101.2	99.9	96.8	93.6	90.4	86.7	83.5	82.2	81.0	81.0
62°	96.8	95.6	94.8	91.7	88.6	84.7	81.6	78.5	76.6	75.2	75.8
63°	91.1	90.4	89.2	86.7	83.5	79.7	75.8	73.3	71.5	69.6	70.2
64°	86.7	86.1	84.1	81.6	78.5	74.6	70.8	68.3	67.1	65.1	64.5
65°	81.0	80.3	79.7	76.6	73.3	69.6	66.5	63.8	62.0	60.7	59.5
66°	75.8	76.6	75.2	72.7	69.0	65.7	61.3	58.8	57.6	55.7	54.5
67°	71.5	71.5	70.2	67.7	63.8	60.7	57.6	54.5	52.5	50.6	50.0
67.5°	69.0	69.0	67.7	64.5	62.0	58.2	55.1	52.5	50.0	48.7	47.5
68°	66.5	66.5	65.7	63.2	60.1	56.3	53.1	50.0	47.5	45.6	45.0
69°	62.0	62.6	61.3	58.8	55.7	51.9	48.7	46.2	43.6	41.7	40.5
70°	58.2	57.6	56.3	53.7	50.6	48.1	45.0	41.7	39.2	36.7	36.1
71°	53.1	53.1	51.9	50.0	46.8	43.6	40.5	38.0	35.5	32.2	31.6
72°	49.3	49.3	48.1	45.6	43.0	39.9	36.7	33.5	31.6	28.5	27.2
72.5°	46.8	47.5	46.2	43.6	41.1	37.3	34.7	32.2	29.1	26.6	25.2
73°	45.6	45.0	44.2	41.7	38.6	36.1	32.9	30.4	27.2	24.6	23.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	28.5	28.5	27.9	25.2	22.7	20.2	17.7	15.1	12.6	10.1	8.9
80°	19.6	20.2	19.0	17.7	15.9	13.3	10.7	8.9	6.4	5.0	3.8
82.5°	12.6	12.6	12.0	10.7	9.5	7.6	6.4	4.4	3.1	2.5	1.9
85°	6.4	7.0	6.4	5.6	4.4	3.8	3.1	1.9	1.3	0.6	0.6
87.5°	2.5	2.5	2.5	1.9	1.9	1.3	0.6	0.6	0.6	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°	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9	466.9
2.5°	464.9	464.9	463.6	463.0	462.4	461.7	461.1	460.5	460.5	461.1
5°	461.1	459.9	457.4	456.6	454.8	454.1	452.9	452.2	452.9	452.2
7.5°	455.4	452.9	449.7	448.5	445.9	444.6	442.8	442.8	441.5	442.1
10°	447.9	444.0	440.2	437.6	435.8	433.9	432.6	431.4	430.8	430.8
12.5°	438.4	433.9	430.1	426.3	423.1	421.9	419.4	419.4	418.1	417.5
15°	427.6	421.9	417.5	413.6	411.1	408.6	406.8	405.4	404.2	404.2
17.5°	413.6	408.6	404.2	399.8	395.9	394.0	392.2	390.3	390.3	389.0
20°	398.5	392.8	389.0	384.5	381.4	378.3	375.7	375.7	374.4	375.0
22.5°	381.4	374.4	370.7	367.5	364.3	361.8	359.3	359.3	358.7	358.0
25°	362.4	356.8	352.3	348.5	346.7	344.1	343.4	342.2	341.6	341.6
27.5°	342.2	337.8	332.1	330.2	327.7	326.3	326.3	325.7	324.5	325.1
30°	320.7	315.6	312.5	311.2	308.7	308.7	308.1	306.8	306.8	307.4
32.5°	299.8	294.7	292.2	291.6	289.1	289.1	288.5	289.1	289.1	289.7
35°	277.1	272.6	272.0	270.1	269.5	269.5	269.5	270.7	272.0	270.1
37.5°	255.5	252.4	250.5	249.9	250.5	250.5	251.1	253.0	252.4	251.7
40°	233.4	230.9	229.6	229.6	230.9	232.1	232.1	234.0	234.6	234.0
42.5°	211.3	209.4	209.4	210.0	211.3	211.9	213.8	215.6	216.4	217.0
45°	190.4	190.4	190.4	191.0	191.6	192.9	195.4	197.4	198.0	198.6
47.5°	170.2	169.5	171.4	172.0	173.9	174.5	176.5	179.0	179.6	180.3
50°	151.2	152.4	153.0	154.9	156.3	156.3	158.8	160.0	161.9	161.9
52.5°	133.4	135.3	135.9	137.9	138.5	139.2	140.4	142.3	143.6	143.6
55°	117.7	118.3	119.6	120.2	122.1	122.7	123.9	124.6	126.5	125.8
56°	110.7	111.9	112.6	113.8	115.2	115.8	117.1	117.7	118.9	119.6
57°	104.3	105.1	106.9	107.6	108.8	108.8	109.4	111.3	111.3	111.9
58°	98.1	99.3	99.9	100.6	101.8	102.4	103.7	104.3	105.1	104.3
59°	92.3	93.0	93.6	93.6	94.8	94.8	96.8	98.1	98.7	98.7
60°	86.7	86.7	87.3	87.9	89.2	89.8	89.8	91.1	91.1	91.1
61°	81.0	81.0	81.6	82.2	82.8	82.8	84.1	84.1	84.7	85.3
62°	75.8	75.2	75.2	75.8	75.8	77.2	77.8	78.5	79.1	78.5
63°	70.2	69.6	69.6	69.6	69.6	70.8	70.8	71.5	72.7	72.1
64°	63.8	63.8	63.8	63.8	64.5	64.5	65.7	66.5	67.1	67.7
65°	59.5	58.2	57.6	57.6	58.2	58.8	59.5	60.1	60.7	60.7
66°	54.5	53.1	52.5	52.5	52.5	52.5	53.7	53.7	55.1	55.1
67°	48.7	47.5	46.8	46.2	46.2	46.2	48.1	47.5	47.5	47.5
67.5°	46.8	45.0	44.2	43.6	43.0	44.2	43.6	44.2	44.2	43.6
68°	44.2	43.0	41.7	40.5	40.5	40.5	41.1	41.7	41.1	40.5
69°	39.2	38.6	36.7	35.5	34.7	35.5	34.7	35.5	34.7	35.5
70°	34.7	32.9	31.0	30.4	29.7	29.7	29.7	29.1	29.7	29.1
71°	30.4	28.5	26.6	25.2	24.6	24.6	24.0	24.6	24.0	24.6
72°	26.0	24.0	21.5	20.2	20.2	20.2	20.2	19.6	20.2	19.6
72.5°	24.0	21.5	19.6	18.4	17.7	17.7	17.7	17.7	17.1	17.7
73°	22.1	19.6	17.1	16.5	16.5	16.5	15.9	15.1	15.9	15.9



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	7.6	5.6	5.0	5.0	5.0	5.0	5.0	5.0	4.4	4.4
80°	3.1	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	41.1	41.1	39.9	38.0	34.7	31.6	29.1	26.6	23.4	20.2	19.0
75°	38.0	37.3	36.1	34.1	31.6	28.5	26.0	22.7	20.2	17.1	15.9





74°	18.4	15.1	13.9	12.6	12.6	12.6	12.0	12.0	12.0	12.6
75°	14.5	12.0	10.7	9.5	10.1	9.5	10.1	9.5	9.5	9.5



(END OF REPORT)