

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: P583618

Luminaire Tested: **HC807D010-HM80520840-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583618  
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: HC807D010-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: 962.9 lumens  
Efficiency: N/A  
Efficacy: 120.4 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

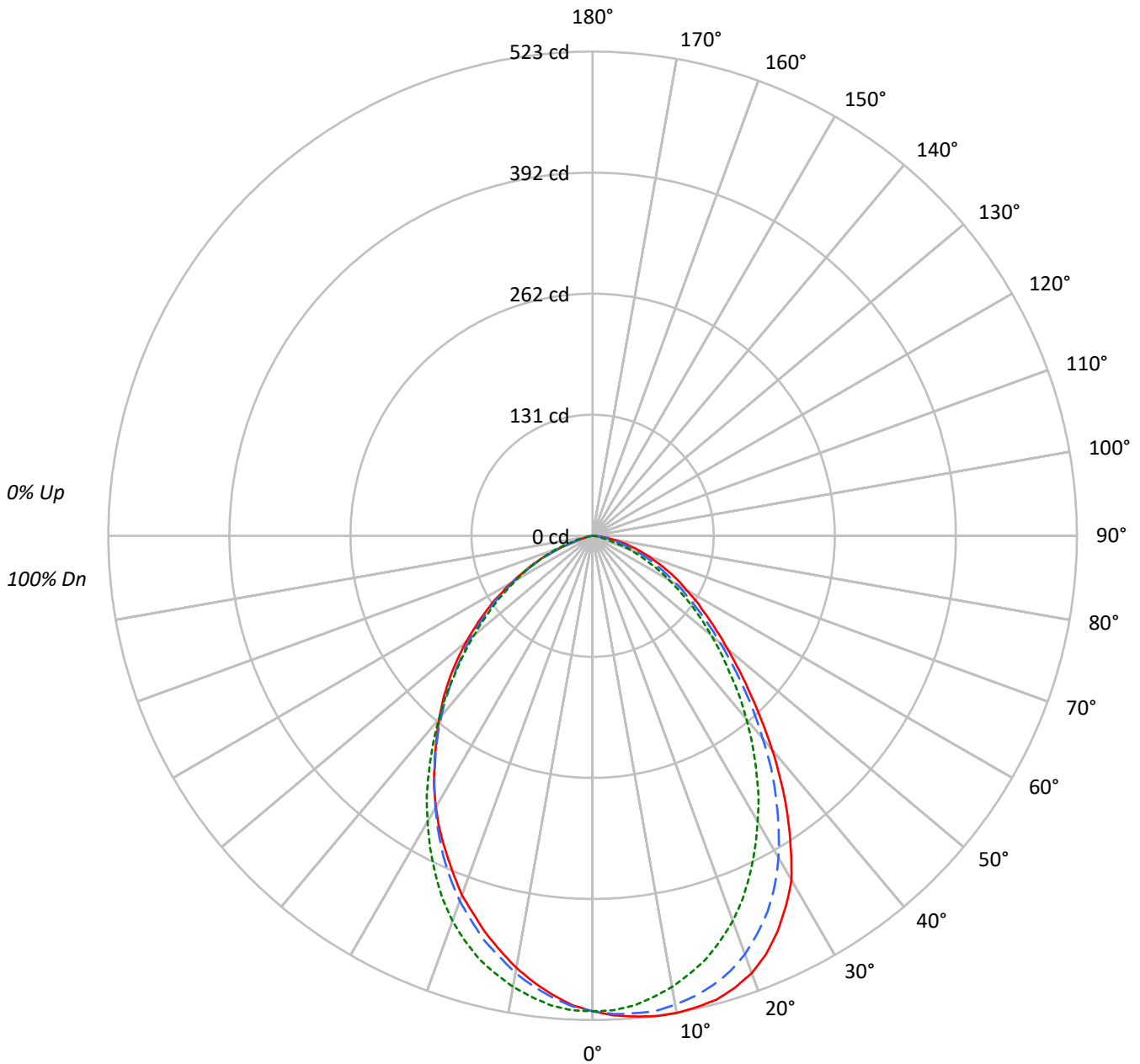
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	15838	15838	15838
5°	16136	15768	15403
10°	16389	15493	14839
15°	16553	15106	14200
20°	16490	14524	13546
25°	16056	13684	12786
30°	15293	12687	12046
35°	13804	11579	11188
40°	12133	10394	10365
45°	10471	9136	9533
50°	9115	8016	8549
55°	8080	6957	7446
60°	7210	5884	6186
65°	6494	4772	4874
70°	5779	3579	2885
75°	4968	2073	1239
80°	3836	746	355
85°	2441	248	248



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	5.0
10°-20°	134.2	13.9
20°-30°	189.9	19.7
30°-40°	200.1	20.8
40°-50°	170.0	17.7
50°-60°	122.4	12.7
60°-70°	70.6	7.3
70°-80°	24.2	2.5
80°-90°	3.3	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°	372.3	38.7
0°-40°	572.3	59.4
0°-60°	864.8	89.8
0°-90°	962.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	962.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	514	514	514	514	514	
5°	521	518	509	500	498	50
15°	518	502	473	452	445	146
25°	472	448	402	381	376	216
35°	367	345	308	296	297	228
45°	240	229	210	211	219	187
55°	150	138	129	134	138	135
65°	89	77	65	64	67	89
75°	42	31	17	11	10	44
85°	7	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°	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6
2.5°	518.5	519.2	518.5	518.5	517.8	517.1	516.5	515.8	514.3	512.9	512.9
5°	521.3	522.7	521.3	521.3	519.2	517.8	516.5	514.3	511.6	509.4	509.4
7.5°	523.4	523.4	523.4	521.3	519.9	517.8	514.3	510.9	507.4	503.9	502.5
10°	523.4	523.4	522.7	519.9	518.5	514.3	510.9	506.0	501.1	496.3	494.8
12.5°	521.3	522.0	520.5	517.8	514.3	509.4	504.6	498.3	492.8	487.2	484.5
15°	518.5	517.8	516.5	512.9	508.7	502.5	497.6	490.7	483.0	476.1	473.2
17.5°	511.6	511.6	509.4	506.0	500.5	493.4	485.8	478.1	469.8	462.1	458.6
20°	502.5	502.5	499.7	495.6	490.0	481.0	472.6	463.5	453.7	446.1	442.6
22.5°	489.2	490.0	486.5	481.6	475.4	465.0	456.6	445.4	435.7	426.6	423.9
25°	471.9	473.2	469.8	465.0	456.6	447.5	437.1	426.6	415.5	406.4	402.2
27.5°	451.7	452.4	449.0	444.1	435.7	425.9	415.5	404.4	393.9	384.2	380.0
30°	429.5	426.6	425.3	419.0	409.9	401.6	389.8	380.7	369.6	361.2	356.3
32.5°	398.1	399.5	395.3	390.4	383.5	373.8	364.0	353.6	343.1	336.9	333.4
35°	366.7	368.2	366.1	361.2	353.6	345.2	335.4	327.8	318.7	311.1	307.6
37.5°	334.1	334.1	332.7	329.9	324.3	316.7	306.9	299.2	291.6	285.4	283.2
40°	301.4	299.9	299.2	297.2	292.3	285.4	279.0	272.8	265.2	261.0	258.2
42.5°	269.4	269.4	267.9	265.9	261.0	257.5	251.3	244.3	238.8	234.6	234.6
45°	240.1	240.8	238.8	237.3	234.6	229.0	223.5	218.6	213.7	210.9	209.5
47.5°	214.4	214.4	212.2	210.9	208.0	203.3	198.4	194.2	190.7	188.6	188.0
50°	190.0	190.0	190.0	186.5	183.1	179.6	176.1	171.2	169.1	167.8	167.1
52.5°	169.1	168.4	168.4	165.6	162.2	158.0	154.5	150.3	148.3	146.9	147.6
55°	150.3	150.3	149.6	146.1	142.7	138.5	135.0	131.6	130.1	128.7	129.4
56°	142.7	142.7	142.0	139.2	135.0	131.6	127.4	123.9	121.8	122.5	122.5
57°	137.1	135.8	135.8	132.3	128.7	123.9	120.5	116.9	115.6	114.8	114.8
58°	130.1	129.4	128.7	125.2	121.8	117.6	114.1	110.7	108.6	108.6	107.9
59°	123.2	123.2	121.8	119.0	115.6	111.4	107.9	104.4	102.3	101.6	101.6
60°	116.9	117.6	115.6	112.8	109.9	105.0	101.0	98.1	96.1	95.4	95.4
61°	111.4	111.4	109.9	106.5	103.0	99.5	95.4	91.9	90.5	89.0	89.0
62°	106.5	105.0	104.4	101.0	97.4	93.2	89.7	86.3	84.2	82.8	83.5
63°	100.3	99.5	98.1	95.4	91.9	87.7	83.5	80.8	78.6	76.6	77.2
64°	95.4	94.6	92.6	89.7	86.3	82.1	77.9	75.2	73.7	71.7	71.0
65°	89.0	88.4	87.7	84.2	80.8	76.6	73.1	70.3	68.2	66.8	65.4
66°	83.5	84.2	82.8	80.1	75.9	72.4	67.5	64.8	63.3	61.3	59.9
67°	78.6	78.6	77.2	74.4	70.3	66.8	63.3	59.9	57.7	55.7	55.0
67.5°	75.9	75.9	74.4	71.0	68.2	64.1	60.6	57.7	55.0	53.5	52.2
68°	73.1	73.1	72.4	69.5	66.1	61.9	58.4	55.0	52.2	50.1	49.5
69°	68.2	69.0	67.5	64.8	61.3	57.1	53.5	50.8	48.0	45.9	44.6
70°	64.1	63.3	61.9	59.2	55.7	52.9	49.5	45.9	43.1	40.4	39.7
71°	58.4	58.4	57.1	55.0	51.5	48.0	44.6	41.7	39.0	35.5	34.8
72°	54.3	54.3	52.9	50.1	47.3	43.9	40.4	36.9	34.8	31.3	29.9
72.5°	51.5	52.2	50.8	48.0	45.3	41.1	38.2	35.5	32.0	29.3	27.8
73°	50.1	49.5	48.8	45.9	42.4	39.7	36.2	33.5	29.9	27.1	25.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	31.3	31.3	30.6	27.8	25.1	22.2	19.5	16.7	13.9	11.1	9.8
80°	21.6	22.2	20.9	19.5	17.4	14.6	11.8	9.8	6.9	5.6	4.2
82.5°	13.9	13.9	13.3	11.8	10.4	8.4	6.9	4.9	3.5	2.7	2.0
85°	6.9	7.6	6.9	6.2	4.9	4.2	3.5	2.0	1.4	0.7	0.7
87.5°	2.7	2.7	2.7	2.0	2.0	1.4	0.7	0.7	0.7	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°	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6	513.6
2.5°	511.6	511.6	510.1	509.4	508.7	508.1	507.4	506.7	506.7	507.4
5°	507.4	506.0	503.2	502.5	500.5	499.7	498.3	497.6	498.3	497.6
7.5°	501.1	498.3	494.8	493.4	490.7	489.2	487.2	487.2	485.8	486.5
10°	492.8	488.6	484.5	481.6	479.6	477.4	476.1	474.7	473.9	473.9
12.5°	482.3	477.4	473.2	469.0	465.6	464.3	461.4	461.4	460.1	459.4
15°	470.5	464.3	459.4	455.2	452.4	449.6	447.5	446.1	444.8	444.8
17.5°	455.2	449.6	444.8	439.9	435.7	433.5	431.5	429.5	429.5	428.0
20°	438.4	432.2	428.0	423.1	419.7	416.2	413.5	413.5	412.0	412.8
22.5°	419.7	412.0	407.9	404.4	400.9	398.1	395.3	395.3	394.6	393.9
25°	398.8	392.6	387.7	383.5	381.4	378.6	378.0	376.5	375.8	375.8
27.5°	376.5	371.6	365.4	363.3	360.5	359.1	359.1	358.4	357.1	357.8
30°	352.9	347.3	343.8	342.4	339.6	339.6	338.9	337.6	337.6	338.3
32.5°	329.9	324.3	321.6	320.9	318.1	318.1	317.4	318.1	318.1	318.7
35°	304.8	299.9	299.2	297.2	296.5	296.5	296.5	297.9	299.2	297.2
37.5°	281.2	277.7	275.6	275.0	275.6	275.6	276.3	278.4	277.7	277.0
40°	256.8	254.1	252.6	252.6	254.1	255.4	255.4	257.5	258.2	257.5
42.5°	232.4	230.4	230.4	231.1	232.4	233.1	235.3	237.3	238.0	238.8
45°	209.5	209.5	209.5	210.2	210.9	212.2	215.1	217.1	217.8	218.6
47.5°	187.3	186.5	188.6	189.3	191.4	192.0	194.2	196.9	197.7	198.4
50°	166.3	167.8	168.4	170.5	172.0	172.0	174.7	176.1	178.2	178.2
52.5°	146.9	148.9	149.6	151.8	152.4	153.1	154.5	156.5	158.0	158.0
55°	129.4	130.1	131.6	132.3	134.3	135.0	136.5	137.1	139.2	138.5
56°	121.8	123.2	123.9	125.2	126.7	127.4	128.7	129.4	130.9	131.6
57°	114.8	115.6	117.6	118.3	119.7	119.7	120.5	122.5	122.5	123.2
58°	107.9	109.2	109.9	110.7	112.1	112.8	114.1	114.8	115.6	114.8
59°	101.6	102.3	103.0	103.0	104.4	104.4	106.5	107.9	108.6	108.6
60°	95.4	95.4	96.1	96.8	98.1	98.8	98.8	100.3	100.3	100.3
61°	89.0	89.0	89.7	90.5	91.2	91.2	92.6	92.6	93.2	93.9
62°	83.5	82.8	82.8	83.5	83.5	85.0	85.6	86.3	87.0	86.3
63°	77.2	76.6	76.6	76.6	76.6	77.9	77.9	78.6	80.1	79.3
64°	70.3	70.3	70.3	70.3	71.0	71.0	72.4	73.1	73.7	74.4
65°	65.4	64.1	63.3	63.3	64.1	64.8	65.4	66.1	66.8	66.8
66°	59.9	58.4	57.7	57.7	57.7	57.7	59.2	59.2	60.6	60.6
67°	53.5	52.2	51.5	50.8	50.8	50.8	52.9	52.2	52.2	52.2
67.5°	51.5	49.5	48.8	48.0	47.3	48.8	48.0	48.8	48.8	48.0
68°	48.8	47.3	45.9	44.6	44.6	44.6	45.3	45.9	45.3	44.6
69°	43.1	42.4	40.4	39.0	38.2	39.0	38.2	39.0	38.2	39.0
70°	38.2	36.2	34.1	33.5	32.7	32.7	32.7	32.0	32.7	32.0
71°	33.5	31.3	29.3	27.8	27.1	27.1	26.4	27.1	26.4	27.1
72°	28.6	26.4	23.7	22.2	22.2	22.2	22.2	21.6	22.2	21.6
72.5°	26.4	23.7	21.6	20.2	19.5	19.5	19.5	19.5	18.8	19.5
73°	24.4	21.6	18.8	18.0	18.0	18.0	17.4	16.7	17.4	17.4





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	8.4	6.2	5.6	5.6	5.6	5.6	5.6	5.6	4.9	4.9
80°	3.5	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	45.3	45.3	43.9	41.7	38.2	34.8	32.0	29.3	25.7	22.2	20.9
75°	41.7	41.1	39.7	37.6	34.8	31.3	28.6	25.1	22.2	18.8	17.4







74°	20.2	16.7	15.3	13.9	13.9	13.9	13.3	13.3	13.3	13.9
75°	16.0	13.3	11.8	10.4	11.1	10.4	11.1	10.4	10.4	10.4



(END OF REPORT)