

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: P583584

Luminaire Tested: **HC807D010-HM80520830-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583584  
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-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: 861.5 lumens  
Efficiency: N/A  
Efficacy: 107.7 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

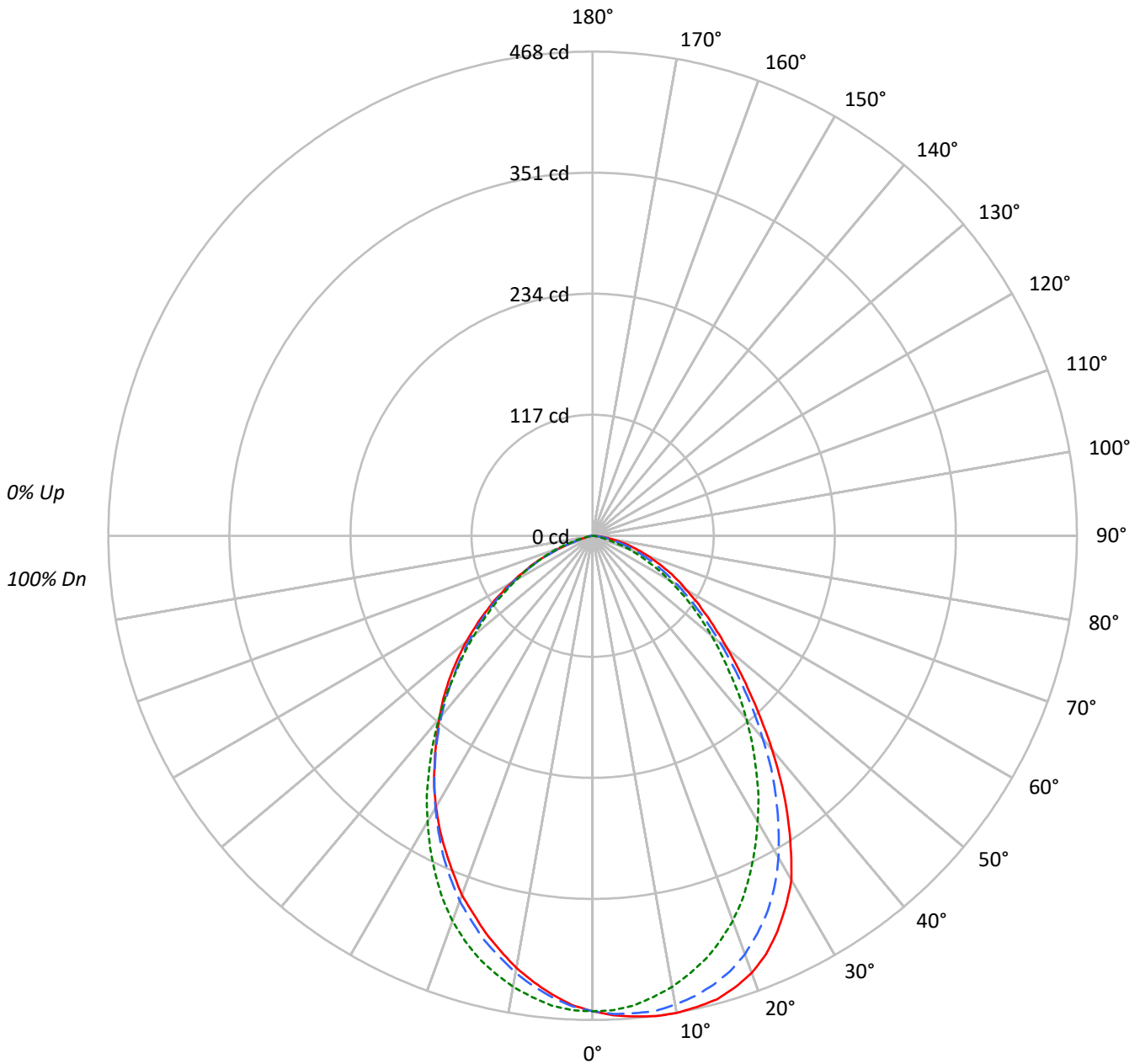
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	14172	14172	14172
5°	14437	14109	13784
10°	14663	13862	13279
15°	14810	13517	12703
20°	14754	12995	12119
25°	14365	12245	11442
30°	13680	11351	10775
35°	12351	10360	10010
40°	10852	9299	9275
45°	9372	8172	8526
50°	8155	7172	7647
55°	7236	6226	6661
60°	6451	5261	5526
65°	5815	4276	4363
70°	5157	3201	2588
75°	4456	1847	1108
80°	3445	657	337
85°	2194	212	212



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	5.0
10°-20°	120.1	13.9
20°-30°	169.9	19.7
30°-40°	179.0	20.8
40°-50°	152.1	17.7
50°-60°	109.5	12.7
60°-70°	63.2	7.3
70°-80°	21.6	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°	333.1	38.7
0°-40°	512.1	59.4
0°-60°	773.7	89.8
0°-90°	861.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	861.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	460	460	460	460	460	
5°	466	463	456	448	445	45
15°	464	450	423	405	398	131
25°	422	400	360	341	336	194
35°	328	309	275	265	266	204
45°	215	205	187	189	196	167
55°	135	124	116	120	124	121
65°	80	68	59	57	60	79
75°	37	28	16	10	9	39
85°	6	4	1	1	1	8
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°	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6
2.5°	463.9	464.5	463.9	463.9	463.3	462.7	462.0	461.4	460.2	458.9	458.9
5°	466.4	467.6	466.4	466.4	464.5	463.3	462.0	460.2	457.7	455.8	455.8
7.5°	468.3	468.3	468.3	466.4	465.1	463.3	460.2	457.1	454.0	450.9	449.6
10°	468.3	468.3	467.6	465.1	463.9	460.2	457.1	452.7	448.4	443.9	442.7
12.5°	466.4	467.0	465.8	463.3	460.2	455.8	451.5	445.9	440.8	435.9	433.4
15°	463.9	463.3	462.0	458.9	455.2	449.6	445.3	439.0	432.1	425.9	423.4
17.5°	457.7	457.7	455.8	452.7	447.8	441.4	434.6	427.8	420.3	413.5	410.4
20°	449.6	449.6	447.0	443.3	438.3	430.3	422.8	414.7	405.9	399.1	396.0
22.5°	437.7	438.3	435.2	430.9	425.3	416.0	408.5	398.5	389.8	381.7	379.2
25°	422.2	423.4	420.3	416.0	408.5	400.4	391.0	381.7	371.8	363.6	359.9
27.5°	404.1	404.7	401.6	397.2	389.8	381.1	371.8	361.7	352.4	343.7	340.0
30°	384.2	381.7	380.5	374.9	366.7	359.3	348.7	340.6	330.7	323.1	318.8
32.5°	356.2	357.4	353.7	349.3	343.1	334.4	325.6	316.3	307.0	301.4	298.3
35°	328.1	329.5	327.5	323.1	316.3	308.9	300.2	293.3	285.2	278.3	275.2
37.5°	298.9	298.9	297.7	295.2	290.1	283.3	274.6	267.8	260.9	255.3	253.5
40°	269.6	268.4	267.8	265.9	261.6	255.3	249.8	244.1	237.2	233.5	231.0
42.5°	241.0	241.0	239.7	237.9	233.5	230.4	224.8	218.6	213.5	209.8	209.8
45°	214.9	215.5	213.5	212.4	209.8	204.8	199.9	195.5	191.2	188.7	187.4
47.5°	191.8	191.8	189.9	188.7	186.2	181.9	177.5	173.8	170.6	168.7	168.1
50°	170.0	170.0	170.0	166.8	163.7	160.6	157.5	153.2	151.3	150.1	149.5
52.5°	151.3	150.7	150.7	148.2	145.1	141.4	138.3	134.6	132.6	131.3	132.0
55°	134.6	134.6	133.8	130.7	127.6	123.9	120.8	117.7	116.4	115.2	115.8
56°	127.6	127.6	127.0	124.5	120.8	117.7	114.0	110.9	109.0	109.6	109.6
57°	122.7	121.4	121.4	118.3	115.2	110.9	107.7	104.6	103.4	102.8	102.8
58°	116.4	115.8	115.2	112.1	109.0	105.3	102.2	99.1	97.2	97.2	96.6
59°	110.2	110.2	109.0	106.5	103.4	99.7	96.6	93.4	91.5	90.9	90.9
60°	104.6	105.3	103.4	100.9	98.3	94.0	90.3	87.8	85.9	85.3	85.3
61°	99.7	99.7	98.3	95.2	92.1	89.0	85.3	82.2	80.9	79.7	79.7
62°	95.2	94.0	93.4	90.3	87.2	83.4	80.3	77.2	75.4	74.1	74.7
63°	89.6	89.0	87.8	85.3	82.2	78.5	74.7	72.2	70.4	68.5	69.1
64°	85.3	84.7	82.8	80.3	77.2	73.5	69.8	67.3	66.0	64.2	63.6
65°	79.7	79.1	78.5	75.4	72.2	68.5	65.4	62.9	61.1	59.8	58.6
66°	74.7	75.4	74.1	71.6	67.9	64.8	60.3	58.0	56.6	54.9	53.5
67°	70.4	70.4	69.1	66.7	62.9	59.8	56.6	53.5	51.6	49.8	49.2
67.5°	67.9	67.9	66.7	63.6	61.1	57.2	54.1	51.6	49.2	47.9	46.7
68°	65.4	65.4	64.8	62.3	59.2	55.4	52.3	49.2	46.7	44.8	44.2
69°	61.1	61.7	60.3	58.0	54.9	51.0	47.9	45.4	43.0	41.1	39.8
70°	57.2	56.6	55.4	52.9	49.8	47.3	44.2	41.1	38.6	36.1	35.5
71°	52.3	52.3	51.0	49.2	46.1	43.0	39.8	37.4	34.9	31.8	31.2
72°	48.5	48.5	47.3	44.8	42.3	39.2	36.1	33.0	31.2	28.0	26.8
72.5°	46.1	46.7	45.4	43.0	40.5	36.7	34.3	31.8	28.7	26.2	24.9
73°	44.8	44.2	43.6	41.1	38.0	35.5	32.4	29.9	26.8	24.3	23.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	28.0	28.0	27.4	24.9	22.5	20.0	17.4	14.9	12.4	9.9	8.7
80°	19.4	20.0	18.6	17.4	15.5	13.0	10.6	8.7	6.2	5.0	3.7
82.5°	12.4	12.4	11.8	10.6	9.3	7.5	6.2	4.3	3.1	2.5	1.9
85°	6.2	6.8	6.2	5.6	4.3	3.7	3.1	1.9	1.2	0.6	0.6
87.5°	2.5	2.5	2.5	1.9	1.9	1.2	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°	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6	459.6
2.5°	457.7	457.7	456.5	455.8	455.2	454.6	454.0	453.3	453.3	454.0
5°	454.0	452.7	450.2	449.6	447.8	447.0	445.9	445.3	445.9	445.3
7.5°	448.4	445.9	442.7	441.4	439.0	437.7	435.9	435.9	434.6	435.2
10°	440.8	437.1	433.4	430.9	429.0	427.2	425.9	424.7	424.1	424.1
12.5°	431.5	427.2	423.4	419.7	416.6	415.4	412.9	412.9	411.6	411.0
15°	421.0	415.4	411.0	407.3	404.7	402.2	400.4	399.1	397.9	397.9
17.5°	407.3	402.2	397.9	393.5	389.8	387.9	386.1	384.2	384.2	383.0
20°	392.3	386.7	383.0	378.6	375.5	372.4	369.9	369.9	368.7	369.3
22.5°	375.5	368.7	365.0	361.7	358.6	356.2	353.7	353.7	353.1	352.4
25°	356.8	351.2	346.8	343.1	341.3	338.8	338.1	336.9	336.3	336.3
27.5°	336.9	332.6	327.0	325.0	322.5	321.3	321.3	320.7	319.4	320.0
30°	315.7	310.7	307.6	306.4	303.9	303.9	303.3	302.0	302.0	302.6
32.5°	295.2	290.1	287.6	287.0	284.5	284.5	283.9	284.5	284.5	285.2
35°	272.7	268.4	267.8	265.9	265.3	265.3	265.3	266.5	267.8	265.9
37.5°	251.5	248.4	246.5	245.9	246.5	246.5	247.2	249.0	248.4	247.8
40°	229.8	227.3	226.1	226.1	227.3	228.5	228.5	230.4	231.0	230.4
42.5°	207.9	206.1	206.1	206.7	207.9	208.6	210.4	212.4	212.9	213.5
45°	187.4	187.4	187.4	188.1	188.7	189.9	192.4	194.3	194.9	195.5
47.5°	167.5	166.8	168.7	169.3	171.2	171.8	173.8	176.3	176.9	177.5
50°	148.8	150.1	150.7	152.6	153.8	153.8	156.3	157.5	159.4	159.4
52.5°	131.3	133.2	133.8	135.8	136.3	136.9	138.3	140.1	141.4	141.4
55°	115.8	116.4	117.7	118.3	120.2	120.8	122.0	122.7	124.5	123.9
56°	109.0	110.2	110.9	112.1	113.3	114.0	115.2	115.8	117.1	117.7
57°	102.8	103.4	105.3	105.9	107.1	107.1	107.7	109.6	109.6	110.2
58°	96.6	97.8	98.3	99.1	100.3	100.9	102.2	102.8	103.4	102.8
59°	90.9	91.5	92.1	92.1	93.4	93.4	95.2	96.6	97.2	97.2
60°	85.3	85.3	85.9	86.5	87.8	88.4	88.4	89.6	89.6	89.6
61°	79.7	79.7	80.3	80.9	81.6	81.6	82.8	82.8	83.4	84.0
62°	74.7	74.1	74.1	74.7	74.7	76.0	76.6	77.2	77.8	77.2
63°	69.1	68.5	68.5	68.5	68.5	69.8	69.8	70.4	71.6	71.0
64°	62.9	62.9	62.9	62.9	63.6	63.6	64.8	65.4	66.0	66.7
65°	58.6	57.2	56.6	56.6	57.2	58.0	58.6	59.2	59.8	59.8
66°	53.5	52.3	51.6	51.6	51.6	51.6	52.9	52.9	54.1	54.1
67°	47.9	46.7	46.1	45.4	45.4	45.4	47.3	46.7	46.7	46.7
67.5°	46.1	44.2	43.6	43.0	42.3	43.6	43.0	43.6	43.6	43.0
68°	43.6	42.3	41.1	39.8	39.8	39.8	40.5	41.1	40.5	39.8
69°	38.6	38.0	36.1	34.9	34.3	34.9	34.3	34.9	34.3	34.9
70°	34.3	32.4	30.5	29.9	29.3	29.3	29.3	28.7	29.3	28.7
71°	29.9	28.0	26.2	24.9	24.3	24.3	23.7	24.3	23.7	24.3
72°	25.6	23.7	21.2	20.0	20.0	20.0	20.0	19.4	20.0	19.4
72.5°	23.7	21.2	19.4	18.0	17.4	17.4	17.4	17.4	16.8	17.4
73°	21.7	19.4	16.8	16.1	16.1	16.1	15.5	14.9	15.5	15.5





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	7.5	5.6	5.0	5.0	5.0	5.0	5.0	5.0	4.3	4.3
80°	3.1	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	40.5	40.5	39.2	37.4	34.3	31.2	28.7	26.2	23.1	20.0	18.6
75°	37.4	36.7	35.5	33.6	31.2	28.0	25.6	22.5	20.0	16.8	15.5







74°	18.0	14.9	13.7	12.4	12.4	12.4	11.8	11.8	11.8	12.4
75°	14.3	11.8	10.6	9.3	9.9	9.3	9.9	9.3	9.3	9.3



(END OF REPORT)