

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: P583431

Luminaire Tested: **HC805D010-HM80520827-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583431  
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: HC805D010-HM80520827-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 656.5 lumens  
Efficiency: N/A  
Efficacy: 109.4 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

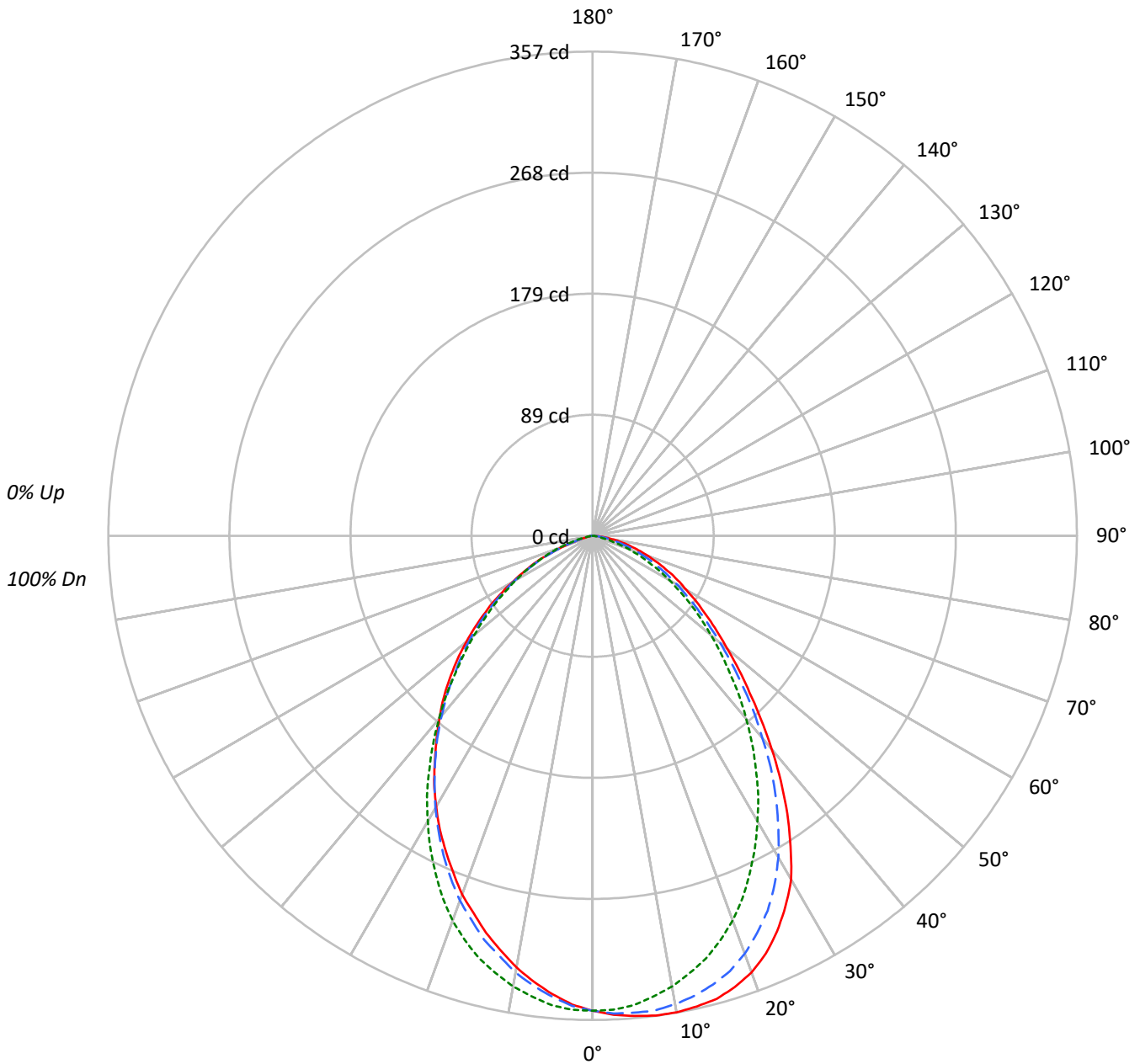
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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°	10799	10799	10799
5°	11001	10753	10503
10°	11172	10565	10120
15°	11285	10302	9679
20°	11243	9904	9234
25°	10949	9329	8720
30°	10426	8652	8214
35°	9415	7894	7630
40°	8272	7089	7069
45°	7139	6227	6498
50°	6212	5459	5829
55°	5511	4742	5075
60°	4915	4009	4212
65°	4429	3254	3327
70°	3940	2443	1965
75°	3396	1418	846
80°	2610	515	249
85°	1698	177	177



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.9	5.0
10°-20°	91.5	13.9
20°-30°	129.4	19.7
30°-40°	136.4	20.8
40°-50°	115.9	17.7
50°-60°	83.5	12.7
60°-70°	48.2	7.3
70°-80°	16.5	2.5
80°-90°	2.3	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°	253.8	38.7
0°-40°	390.2	59.4
0°-60°	589.6	89.8
0°-90°	656.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	656.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	350	350	350	350	350	
5°	355	353	347	341	339	34
15°	354	343	323	308	303	100
25°	322	305	274	260	256	148
35°	250	235	210	202	203	156
45°	164	156	143	144	149	127
55°	102	94	88	92	94	92
65°	61	52	45	44	46	60
75°	28	21	12	8	7	30
85°	5	3	0	0	0	6
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°	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2
2.5°	353.5	354.0	353.5	353.5	353.0	352.6	352.2	351.7	350.7	349.8	349.8
5°	355.4	356.3	355.4	355.4	354.0	353.0	352.2	350.7	348.8	347.4	347.4
7.5°	356.8	356.8	356.8	355.4	354.4	353.0	350.7	348.3	345.9	343.5	342.6
10°	356.8	356.8	356.3	354.4	353.5	350.7	348.3	345.0	341.6	338.4	337.4
12.5°	355.4	355.9	354.9	353.0	350.7	347.4	344.0	339.7	336.0	332.2	330.3
15°	353.5	353.0	352.2	349.8	346.9	342.6	339.3	334.6	329.3	324.6	322.7
17.5°	348.8	348.8	347.4	345.0	341.1	336.5	331.2	326.1	320.3	315.1	312.8
20°	342.6	342.6	340.7	337.9	334.1	327.9	322.2	316.0	309.4	304.2	301.8
22.5°	333.6	334.1	331.7	328.3	324.1	317.0	311.3	303.7	297.1	290.9	289.0
25°	321.8	322.7	320.3	317.0	311.3	305.1	298.1	290.9	283.3	277.1	274.2
27.5°	308.0	308.5	306.1	302.7	297.1	290.4	283.3	275.7	268.6	261.9	259.2
30°	292.8	290.9	289.9	285.7	279.5	273.8	265.7	259.6	252.0	246.3	243.0
32.5°	271.5	272.4	269.6	266.2	261.4	254.8	248.1	241.1	233.9	229.7	227.3
35°	250.1	251.0	249.6	246.3	241.1	235.3	228.7	223.5	217.4	212.1	209.7
37.5°	227.8	227.8	226.8	224.9	221.1	215.9	209.2	204.1	198.8	194.5	193.1
40°	205.5	204.6	204.1	202.7	199.3	194.5	190.3	186.0	180.7	178.0	176.1
42.5°	183.6	183.6	182.7	181.2	178.0	175.6	171.3	166.5	162.8	159.9	159.9
45°	163.7	164.2	162.8	161.8	159.9	156.1	152.4	149.0	145.7	143.8	142.8
47.5°	146.2	146.2	144.7	143.8	141.8	138.6	135.3	132.4	130.0	128.6	128.1
50°	129.5	129.5	129.5	127.1	124.8	122.5	120.1	116.7	115.3	114.3	113.8
52.5°	115.3	114.8	114.8	113.0	110.6	107.7	105.3	102.5	101.0	100.1	100.5
55°	102.5	102.5	102.0	99.7	97.3	94.4	92.0	89.7	88.7	87.7	88.2
56°	97.3	97.3	96.8	94.9	92.0	89.7	86.8	84.5	83.1	83.6	83.6
57°	93.5	92.5	92.5	90.1	87.7	84.5	82.1	79.7	78.8	78.3	78.3
58°	88.7	88.2	87.7	85.5	83.1	80.2	77.8	75.4	74.0	74.0	73.5
59°	84.0	84.0	83.1	81.2	78.8	75.9	73.5	71.2	69.8	69.3	69.3
60°	79.7	80.2	78.8	76.8	74.9	71.7	68.8	66.9	65.5	65.0	65.0
61°	75.9	75.9	74.9	72.7	70.3	67.9	65.0	62.6	61.6	60.7	60.7
62°	72.7	71.7	71.2	68.8	66.4	63.6	61.2	58.9	57.5	56.5	57.0
63°	68.3	67.9	66.9	65.0	62.6	59.8	57.0	55.1	53.6	52.2	52.7
64°	65.0	64.5	63.1	61.2	58.9	56.0	53.1	51.2	50.3	48.8	48.4
65°	60.7	60.2	59.8	57.5	55.1	52.2	49.8	47.9	46.6	45.6	44.6
66°	57.0	57.5	56.5	54.6	51.7	49.3	46.1	44.2	43.2	41.8	40.8
67°	53.6	53.6	52.7	50.8	47.9	45.6	43.2	40.8	39.4	37.9	37.5
67.5°	51.7	51.7	50.8	48.4	46.6	43.7	41.3	39.4	37.5	36.5	35.6
68°	49.8	49.8	49.3	47.4	45.1	42.3	39.9	37.5	35.6	34.1	33.6
69°	46.6	46.9	46.1	44.2	41.8	38.9	36.5	34.6	32.8	31.4	30.4
70°	43.7	43.2	42.3	40.3	37.9	36.0	33.6	31.4	29.4	27.5	27.1
71°	39.9	39.9	38.9	37.5	35.1	32.8	30.4	28.5	26.6	24.2	23.7
72°	37.0	37.0	36.0	34.1	32.3	29.9	27.5	25.1	23.7	21.3	20.3
72.5°	35.1	35.6	34.6	32.8	30.9	28.0	26.1	24.2	21.8	20.0	19.0
73°	34.1	33.6	33.3	31.4	29.0	27.1	24.7	22.7	20.3	18.6	17.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	21.3	21.3	20.8	19.0	17.1	15.2	13.3	11.4	9.5	7.5	6.7
80°	14.7	15.2	14.2	13.3	11.9	9.9	8.0	6.7	4.8	3.8	2.9
82.5°	9.5	9.5	9.0	8.0	7.1	5.7	4.8	3.4	2.4	1.9	1.4
85°	4.8	5.3	4.8	4.3	3.4	2.9	2.4	1.4	1.0	0.5	0.5
87.5°	1.9	1.9	1.9	1.4	1.4	1.0	0.5	0.5	0.5	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°	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2	350.2
2.5°	348.8	348.8	347.8	347.4	346.9	346.4	345.9	345.5	345.5	345.9
5°	345.9	345.0	343.1	342.6	341.1	340.7	339.7	339.3	339.7	339.3
7.5°	341.6	339.7	337.4	336.5	334.6	333.6	332.2	332.2	331.2	331.7
10°	336.0	333.1	330.3	328.3	326.9	325.6	324.6	323.7	323.2	323.2
12.5°	328.8	325.6	322.7	319.8	317.4	316.5	314.6	314.6	313.6	313.1
15°	320.8	316.5	313.1	310.4	308.5	306.6	305.1	304.2	303.2	303.2
17.5°	310.4	306.6	303.2	299.8	297.1	295.7	294.2	292.8	292.8	291.8
20°	299.0	294.7	291.8	288.5	286.2	283.8	281.9	281.9	280.9	281.4
22.5°	286.2	280.9	278.1	275.7	273.3	271.5	269.6	269.6	269.1	268.6
25°	272.0	267.6	264.3	261.4	260.0	258.2	257.7	256.8	256.3	256.3
27.5°	256.8	253.4	249.1	247.7	245.9	244.9	244.9	244.4	243.5	243.9
30°	240.6	236.8	234.4	233.4	231.6	231.6	231.1	230.2	230.2	230.7
32.5°	224.9	221.1	219.3	218.8	216.9	216.9	216.4	216.9	216.9	217.4
35°	207.8	204.6	204.1	202.7	202.2	202.2	202.2	203.1	204.1	202.7
37.5°	191.8	189.4	187.9	187.5	187.9	187.9	188.4	189.8	189.4	188.9
40°	175.1	173.2	172.2	172.2	173.2	174.2	174.2	175.6	176.1	175.6
42.5°	158.5	157.0	157.0	157.5	158.5	159.0	160.4	161.8	162.3	162.8
45°	142.8	142.8	142.8	143.3	143.8	144.7	146.6	148.1	148.5	149.0
47.5°	127.6	127.1	128.6	129.0	130.5	131.0	132.4	134.3	134.8	135.3
50°	113.4	114.3	114.8	116.2	117.2	117.2	119.1	120.1	121.5	121.5
52.5°	100.1	101.5	102.0	103.4	103.9	104.4	105.3	106.8	107.7	107.7
55°	88.2	88.7	89.7	90.1	91.6	92.0	93.0	93.5	94.9	94.4
56°	83.1	84.0	84.5	85.5	86.4	86.8	87.7	88.2	89.2	89.7
57°	78.3	78.8	80.2	80.7	81.6	81.6	82.1	83.6	83.6	84.0
58°	73.5	74.5	74.9	75.4	76.4	76.8	77.8	78.3	78.8	78.3
59°	69.3	69.8	70.3	70.3	71.2	71.2	72.7	73.5	74.0	74.0
60°	65.0	65.0	65.5	66.0	66.9	67.4	67.4	68.3	68.3	68.3
61°	60.7	60.7	61.2	61.6	62.1	62.1	63.1	63.1	63.6	64.0
62°	57.0	56.5	56.5	57.0	57.0	57.9	58.4	58.9	59.4	58.9
63°	52.7	52.2	52.2	52.2	52.2	53.1	53.1	53.6	54.6	54.1
64°	47.9	47.9	47.9	47.9	48.4	48.4	49.3	49.8	50.3	50.8
65°	44.6	43.7	43.2	43.2	43.7	44.2	44.6	45.1	45.6	45.6
66°	40.8	39.9	39.4	39.4	39.4	39.4	40.3	40.3	41.3	41.3
67°	36.5	35.6	35.1	34.6	34.6	34.6	36.0	35.6	35.6	35.6
67.5°	35.1	33.6	33.3	32.8	32.3	33.3	32.8	33.3	33.3	32.8
68°	33.3	32.3	31.4	30.4	30.4	30.4	30.9	31.4	30.9	30.4
69°	29.4	29.0	27.5	26.6	26.1	26.6	26.1	26.6	26.1	26.6
70°	26.1	24.7	23.2	22.7	22.3	22.3	22.3	21.8	22.3	21.8
71°	22.7	21.3	20.0	19.0	18.6	18.6	18.1	18.6	18.1	18.6
72°	19.5	18.1	16.2	15.2	15.2	15.2	15.2	14.7	15.2	14.7
72.5°	18.1	16.2	14.7	13.8	13.3	13.3	13.3	13.3	12.8	13.3
73°	16.6	14.7	12.8	12.3	12.3	12.3	11.9	11.4	11.9	11.9





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	5.7	4.3	3.8	3.8	3.8	3.8	3.8	3.8	3.4	3.4
80°	2.4	1.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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°	30.9	30.9	29.9	28.5	26.1	23.7	21.8	20.0	17.6	15.2	14.2
75°	28.5	28.0	27.1	25.6	23.7	21.3	19.5	17.1	15.2	12.8	11.9







74°	13.8	11.4	10.4	9.5	9.5	9.5	9.0	9.0	9.0	9.5
75°	10.9	9.0	8.0	7.1	7.5	7.1	7.5	7.1	7.1	7.1



(END OF REPORT)