

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: P593512

Luminaire Tested: **HC807D010-HM80520950-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593512  
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-HM80520950-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 847.0 lumens  
Efficiency: N/A  
Efficacy: 105.9 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

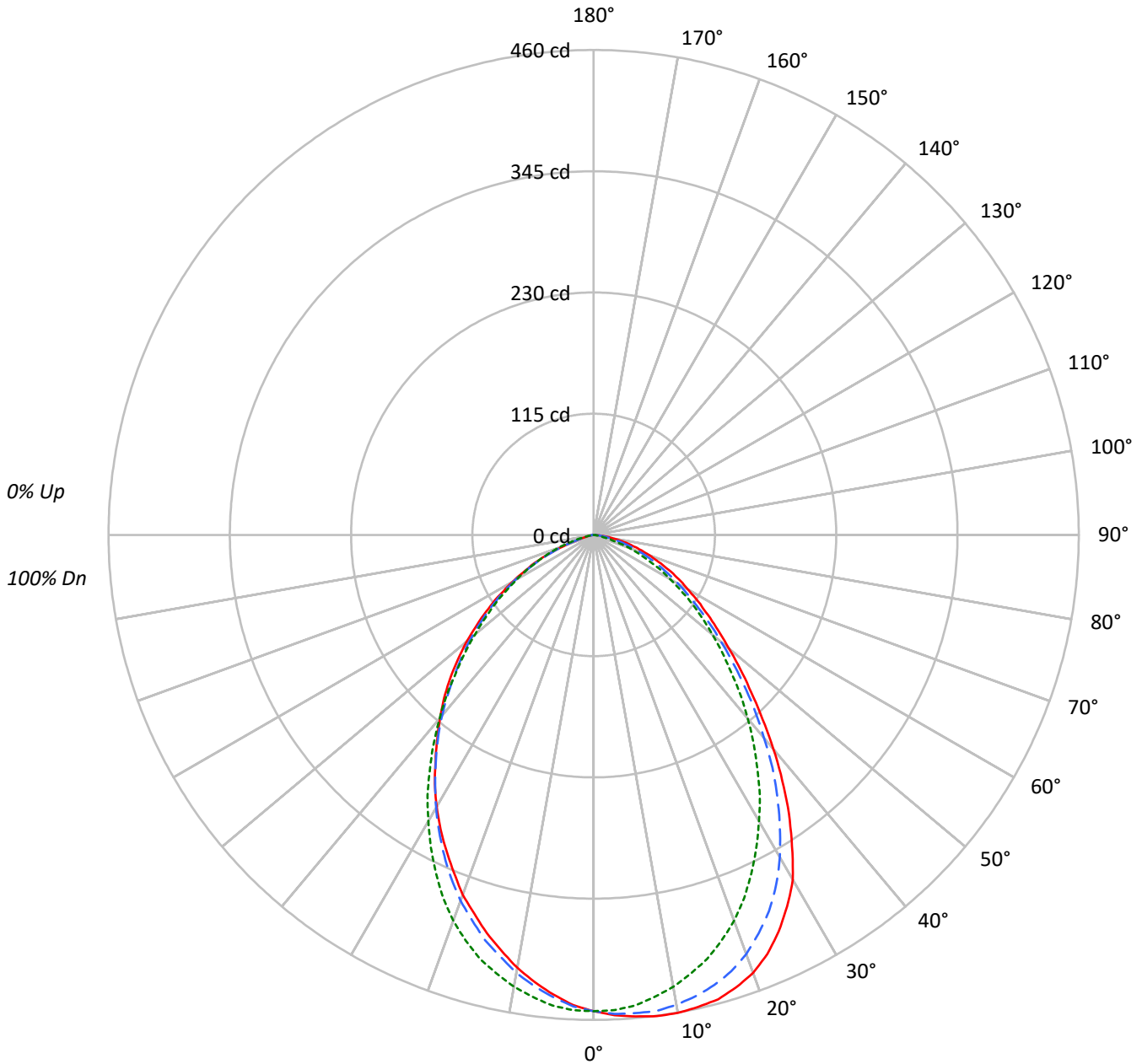
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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°	13932	13932	13932
5°	14192	13871	13549
10°	14413	13627	13054
15°	14557	13287	12486
20°	14504	12775	11912
25°	14120	12038	11245
30°	13449	11159	10597
35°	12148	10183	9836
40°	10671	9146	9118
45°	9210	8037	8386
50°	8021	7047	7517
55°	7113	6123	6548
60°	6346	5174	5440
65°	5720	4203	4290
70°	5076	3147	2542
75°	4373	1823	1096
80°	3374	657	320
85°	2158	212	212



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.4	5.0
10°-20°	118.1	13.9
20°-30°	167.0	19.7
30°-40°	176.0	20.8
40°-50°	149.6	17.7
50°-60°	107.7	12.7
60°-70°	62.1	7.3
70°-80°	21.3	2.5
80°-90°	2.9	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°	327.4	38.7
0°-40°	503.4	59.4
0°-60°	760.7	89.8
0°-90°	847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	847.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	452	452	452	452	452	
5°	458	455	448	440	438	44
15°	456	442	416	398	391	128
25°	415	394	354	335	330	190
35°	323	304	270	261	261	201
45°	211	201	184	186	192	164
55°	132	122	114	118	122	119
65°	78	67	58	56	59	78
75°	37	28	15	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°	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8
2.5°	456.0	456.7	456.0	456.0	455.4	454.8	454.2	453.6	452.4	451.1	451.1
5°	458.5	459.7	458.5	458.5	456.7	455.4	454.2	452.4	449.9	448.1	448.1
7.5°	460.3	460.3	460.3	458.5	457.3	455.4	452.4	449.3	446.3	443.2	442.0
10°	460.3	460.3	459.7	457.3	456.0	452.4	449.3	445.0	440.7	436.5	435.2
12.5°	458.5	459.1	457.9	455.4	452.4	448.1	443.8	438.3	433.4	428.5	426.0
15°	456.0	455.4	454.2	451.1	447.5	442.0	437.7	431.6	424.8	418.7	416.2
17.5°	449.9	449.9	448.1	445.0	440.1	434.0	427.3	420.5	413.2	406.5	403.4
20°	442.0	442.0	439.5	435.8	430.9	423.0	415.6	407.7	399.1	392.4	389.3
22.5°	430.3	430.9	427.9	423.6	418.1	408.9	401.6	391.8	383.2	375.2	372.8
25°	415.0	416.2	413.2	408.9	401.6	393.6	384.4	375.2	365.4	357.5	353.8
27.5°	397.3	397.9	394.8	390.5	383.2	374.6	365.4	355.6	346.4	337.9	334.2
30°	377.7	375.2	374.0	368.5	360.5	353.2	342.8	334.8	325.0	317.8	313.4
32.5°	350.1	351.3	347.7	343.4	337.3	328.7	320.1	310.9	301.9	296.2	293.3
35°	322.7	323.8	322.1	317.8	310.9	303.6	295.0	288.4	280.3	273.7	270.5
37.5°	293.9	293.9	292.7	290.1	285.2	278.6	270.0	263.3	256.4	251.0	249.2
40°	265.1	263.9	263.3	261.3	257.2	251.0	245.5	240.0	233.3	229.6	227.2
42.5°	237.0	237.0	235.7	233.9	229.6	226.5	221.0	214.9	210.0	206.3	206.3
45°	211.2	211.8	210.0	208.8	206.3	201.4	196.5	192.3	188.0	185.5	184.3
47.5°	188.6	188.6	186.7	185.5	183.1	178.8	174.5	170.8	167.8	165.9	165.3
50°	167.2	167.2	167.2	164.1	161.0	158.0	154.9	150.6	148.8	147.6	146.9
52.5°	148.8	148.2	148.2	145.7	142.7	139.0	135.9	132.3	130.4	129.2	129.8
55°	132.3	132.3	131.6	128.6	125.5	121.8	118.8	115.7	114.5	113.3	113.9
56°	125.5	125.5	124.9	122.5	118.8	115.7	112.0	109.0	107.1	107.8	107.8
57°	120.6	119.4	119.4	116.3	113.3	109.0	105.9	102.9	101.6	101.0	101.0
58°	114.5	113.9	113.3	110.2	107.1	103.5	100.4	97.4	95.5	95.5	94.9
59°	108.4	108.4	107.1	104.7	101.6	98.0	94.9	91.8	90.0	89.4	89.4
60°	102.9	103.5	101.6	99.2	96.7	92.5	88.8	86.3	84.5	83.9	83.9
61°	98.0	98.0	96.7	93.7	90.6	87.6	83.9	80.8	79.6	78.4	78.4
62°	93.7	92.5	91.8	88.8	85.7	82.0	79.0	75.9	74.1	72.9	73.5
63°	88.2	87.6	86.3	83.9	80.8	77.1	73.5	71.0	69.2	67.4	68.0
64°	83.9	83.3	81.4	79.0	75.9	72.2	68.6	66.1	64.9	63.1	62.5
65°	78.4	77.8	77.1	74.1	71.0	67.4	64.3	61.8	60.0	58.8	57.6
66°	73.5	74.1	72.9	70.4	66.7	63.7	59.4	56.9	55.7	53.9	52.7
67°	69.2	69.2	68.0	65.5	61.8	58.8	55.7	52.7	50.8	49.0	48.4
67.5°	66.7	66.7	65.5	62.5	60.0	56.3	53.3	50.8	48.4	47.1	45.9
68°	64.3	64.3	63.7	61.2	58.2	54.5	51.4	48.4	45.9	44.1	43.5
69°	60.0	60.6	59.4	56.9	53.9	50.2	47.1	44.7	42.2	40.4	39.2
70°	56.3	55.7	54.5	52.0	49.0	46.5	43.5	40.4	38.0	35.5	34.9
71°	51.4	51.4	50.2	48.4	45.3	42.2	39.2	36.7	34.3	31.2	30.6
72°	47.8	47.8	46.5	44.1	41.6	38.6	35.5	32.5	30.6	27.6	26.3
72.5°	45.3	45.9	44.7	42.2	39.8	36.1	33.7	31.2	28.2	25.7	24.5
73°	44.1	43.5	42.9	40.4	37.3	34.9	31.8	29.4	26.3	23.9	22.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	27.6	27.6	26.9	24.5	22.0	19.6	17.1	14.7	12.2	9.8	8.6
80°	19.0	19.6	18.4	17.1	15.3	12.9	10.4	8.6	6.1	4.9	3.7
82.5°	12.2	12.2	11.6	10.4	9.2	7.3	6.1	4.3	3.1	2.4	1.8
85°	6.1	6.7	6.1	5.5	4.3	3.7	3.1	1.8	1.2	0.6	0.6
87.5°	2.4	2.4	2.4	1.8	1.8	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°	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8
2.5°	449.9	449.9	448.7	448.1	447.5	446.9	446.3	445.6	445.6	446.3
5°	446.3	445.0	442.6	442.0	440.1	439.5	438.3	437.7	438.3	437.7
7.5°	440.7	438.3	435.2	434.0	431.6	430.3	428.5	428.5	427.3	427.9
10°	433.4	429.7	426.0	423.6	421.8	419.9	418.7	417.5	416.9	416.9
12.5°	424.2	419.9	416.2	412.6	409.5	408.3	405.8	405.8	404.6	404.0
15°	413.8	408.3	404.0	400.3	397.9	395.4	393.6	392.4	391.1	391.1
17.5°	400.3	395.4	391.1	386.9	383.2	381.3	379.5	377.7	377.7	376.5
20°	385.6	380.1	376.5	372.2	369.1	366.0	363.6	363.6	362.4	363.0
22.5°	369.1	362.4	358.7	355.6	352.6	350.1	347.7	347.7	347.1	346.4
25°	350.7	345.2	340.9	337.3	335.4	333.0	332.4	331.1	330.5	330.5
27.5°	331.1	327.0	321.3	319.5	317.2	315.8	315.8	315.2	314.0	314.6
30°	310.3	305.4	302.5	301.1	298.8	298.8	298.2	297.0	297.0	297.6
32.5°	290.1	285.2	282.9	282.3	279.7	279.7	279.2	279.7	279.7	280.3
35°	268.2	263.9	263.3	261.3	260.7	260.7	260.7	262.1	263.3	261.3
37.5°	247.4	244.3	242.5	241.7	242.5	242.5	243.1	244.9	244.3	243.7
40°	225.9	223.5	222.3	222.3	223.5	224.7	224.7	226.5	227.2	226.5
42.5°	204.5	202.7	202.7	203.3	204.5	205.1	207.0	208.8	209.4	210.0
45°	184.3	184.3	184.3	184.9	185.5	186.7	189.2	191.0	191.6	192.3
47.5°	164.7	164.1	165.9	166.5	168.4	169.0	170.8	173.3	173.9	174.5
50°	146.3	147.6	148.2	150.0	151.2	151.2	153.7	154.9	156.7	156.7
52.5°	129.2	131.0	131.6	133.5	134.1	134.7	135.9	137.8	139.0	139.0
55°	113.9	114.5	115.7	116.3	118.2	118.8	120.0	120.6	122.5	121.8
56°	107.1	108.4	109.0	110.2	111.4	112.0	113.3	113.9	115.1	115.7
57°	101.0	101.6	103.5	104.1	105.3	105.3	105.9	107.8	107.8	108.4
58°	94.9	96.1	96.7	97.4	98.6	99.2	100.4	101.0	101.6	101.0
59°	89.4	90.0	90.6	90.6	91.8	91.8	93.7	94.9	95.5	95.5
60°	83.9	83.9	84.5	85.1	86.3	86.9	86.9	88.2	88.2	88.2
61°	78.4	78.4	79.0	79.6	80.2	80.2	81.4	81.4	82.0	82.7
62°	73.5	72.9	72.9	73.5	73.5	74.7	75.3	75.9	76.5	75.9
63°	68.0	67.4	67.4	67.4	67.4	68.6	68.6	69.2	70.4	69.8
64°	61.8	61.8	61.8	61.8	62.5	62.5	63.7	64.3	64.9	65.5
65°	57.6	56.3	55.7	55.7	56.3	56.9	57.6	58.2	58.8	58.8
66°	52.7	51.4	50.8	50.8	50.8	50.8	52.0	52.0	53.3	53.3
67°	47.1	45.9	45.3	44.7	44.7	44.7	46.5	45.9	45.9	45.9
67.5°	45.3	43.5	42.9	42.2	41.6	42.9	42.2	42.9	42.9	42.2
68°	42.9	41.6	40.4	39.2	39.2	39.2	39.8	40.4	39.8	39.2
69°	38.0	37.3	35.5	34.3	33.7	34.3	33.7	34.3	33.7	34.3
70°	33.7	31.8	30.0	29.4	28.8	28.8	28.8	28.2	28.8	28.2
71°	29.4	27.6	25.7	24.5	23.9	23.9	23.3	23.9	23.3	23.9
72°	25.1	23.3	20.8	19.6	19.6	19.6	19.6	19.0	19.6	19.0
72.5°	23.3	20.8	19.0	17.8	17.1	17.1	17.1	17.1	16.5	17.1
73°	21.4	19.0	16.5	15.9	15.9	15.9	15.3	14.7	15.3	15.3





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	7.3	5.5	4.9	4.9	4.9	4.9	4.9	4.9	4.3	4.3
80°	3.1	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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°	39.8	39.8	38.6	36.7	33.7	30.6	28.2	25.7	22.7	19.6	18.4
75°	36.7	36.1	34.9	33.1	30.6	27.6	25.1	22.0	19.6	16.5	15.3







74°	17.8	14.7	13.5	12.2	12.2	12.2	11.6	11.6	11.6	12.2
75°	14.1	11.6	10.4	9.2	9.8	9.2	9.8	9.2	9.2	9.2



(END OF REPORT)