

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: P583720

Luminaire Tested: **HC810D010-HM80520830-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583720
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-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: 1071.9 lumens
Efficiency: N/A
Efficacy: 108.3 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

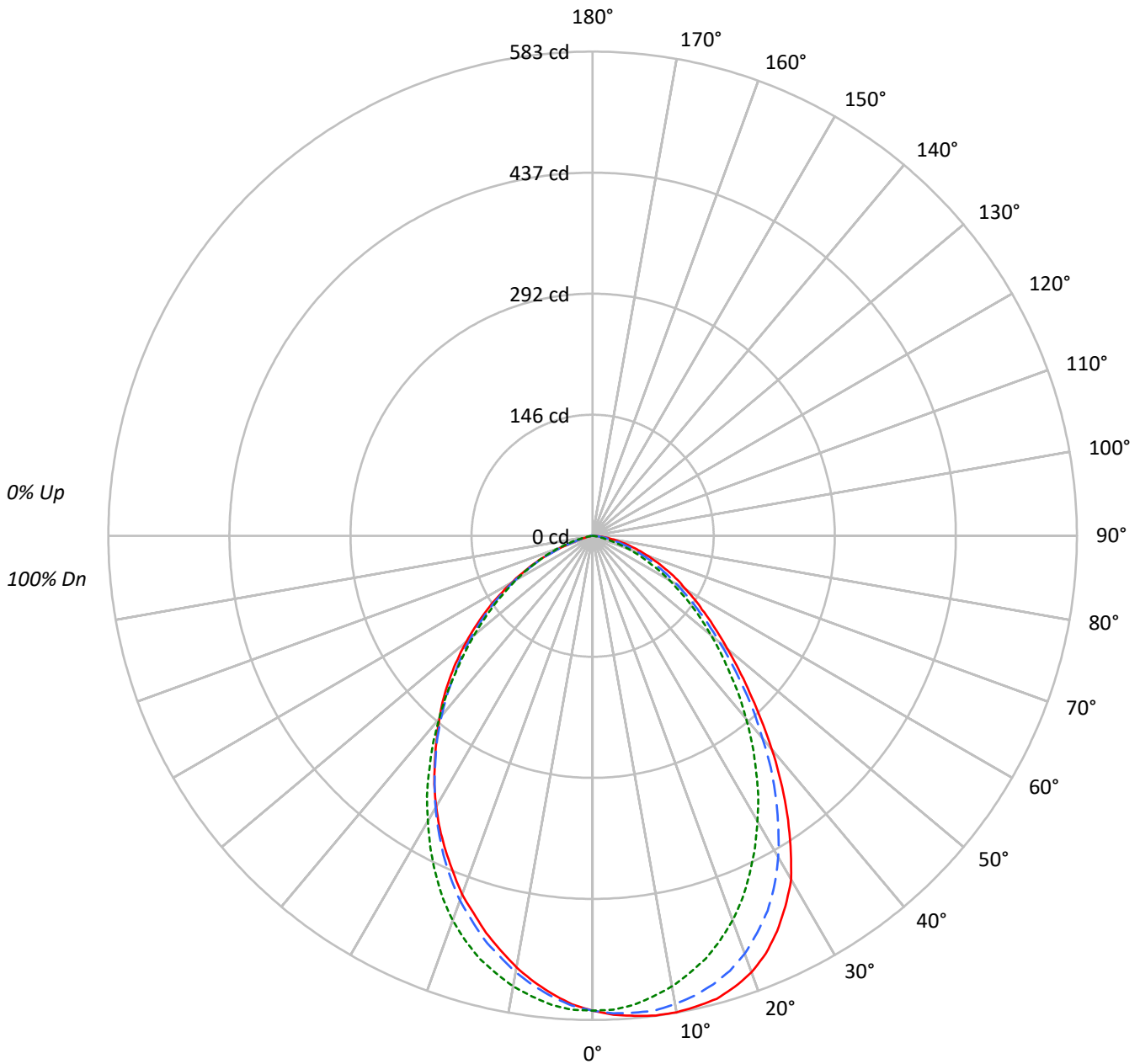
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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°	17632	17632	17632
5°	17963	17554	17149
10°	18242	17250	16523
15°	18427	16818	15806
20°	18357	16171	15075
25°	17873	15239	14236
30°	17020	14125	13409
35°	15370	12889	12453
40°	13505	11569	11541
45°	11657	10170	10610
50°	10151	8918	9513
55°	8994	7747	8290
60°	8030	6543	6876
65°	7238	5312	5429
70°	6428	3976	3219
75°	5540	2311	1394
80°	4262	835	408
85°	2724	248	248



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	5.0
10°-20°	149.4	13.9
20°-30°	211.3	19.7
30°-40°	222.7	20.8
40°-50°	189.3	17.7
50°-60°	136.3	12.7
60°-70°	78.6	7.3
70°-80°	26.9	2.5
80°-90°	3.7	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°	414.5	38.7
0°-40°	637.2	59.4
0°-60°	962.7	89.8
0°-90°	1071.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1071.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	572	572	572	572	572	
5°	580	576	567	557	554	55
15°	577	559	527	504	495	163
25°	525	498	448	424	418	241
35°	408	384	342	330	331	254
45°	267	255	233	235	243	208
55°	167	154	144	150	154	151
65°	99	85	73	71	74	99
75°	46	35	19	12	12	49
85°	8	5	1	1	1	10
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°	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8
2.5°	577.2	578.0	577.2	577.2	576.5	575.6	574.9	574.2	572.6	571.1	571.1
5°	580.3	581.9	580.3	580.3	578.0	576.5	574.9	572.6	569.5	567.1	567.1
7.5°	582.6	582.6	582.6	580.3	578.8	576.5	572.6	568.7	564.8	561.0	559.4
10°	582.6	582.6	581.9	578.8	577.2	572.6	568.7	563.3	557.8	552.4	550.9
12.5°	580.3	581.2	579.6	576.5	572.6	567.1	561.7	554.7	548.6	542.3	539.2
15°	577.2	576.5	574.9	571.1	566.4	559.4	554.0	546.2	537.8	530.0	526.8
17.5°	569.5	569.5	567.1	563.3	557.1	549.3	540.8	532.2	523.0	514.5	510.6
20°	559.4	559.4	556.3	551.7	545.5	535.4	526.1	516.0	505.2	496.7	492.8
22.5°	544.7	545.5	541.6	536.2	529.2	517.6	508.3	495.8	485.0	474.9	471.9
25°	525.3	526.8	523.0	517.6	508.3	498.2	486.6	474.9	462.5	452.4	447.9
27.5°	502.8	503.6	499.8	494.4	485.0	474.2	462.5	450.1	438.5	427.7	423.1
30°	478.0	474.9	473.5	466.5	456.4	447.0	433.9	423.8	411.4	402.1	396.7
32.5°	443.2	444.7	440.1	434.6	427.0	416.1	405.2	393.7	382.0	375.0	371.2
35°	408.3	409.9	407.6	402.1	393.7	384.3	373.5	364.9	354.8	346.3	342.4
37.5°	371.9	371.9	370.3	367.2	361.1	352.5	341.7	333.2	324.7	317.7	315.4
40°	335.5	333.9	333.2	330.8	325.4	317.7	310.7	303.7	295.2	290.5	287.4
42.5°	299.9	299.9	298.3	295.9	290.5	286.7	279.7	272.0	265.8	261.1	261.1
45°	267.3	268.0	265.8	264.2	261.1	254.9	248.7	243.3	237.9	234.8	233.2
47.5°	238.6	238.6	236.3	234.8	231.6	226.2	220.8	216.1	212.3	210.0	209.1
50°	211.6	211.6	211.6	207.7	203.7	199.9	196.0	190.6	188.2	186.7	185.9
52.5°	188.2	187.5	187.5	184.4	180.5	175.9	172.0	167.3	165.0	163.5	164.3
55°	167.3	167.3	166.6	162.8	158.8	154.2	150.4	146.4	144.8	143.4	144.1
56°	158.8	158.8	158.1	154.9	150.4	146.4	141.8	137.9	135.6	136.4	136.4
57°	152.7	151.1	151.1	147.2	143.4	137.9	134.0	130.2	128.6	127.9	127.9
58°	144.8	144.1	143.4	139.4	135.6	130.9	127.1	123.2	120.9	120.9	120.1
59°	137.1	137.1	135.6	132.5	128.6	123.9	120.1	116.2	113.9	113.1	113.1
60°	130.2	130.9	128.6	125.5	122.4	117.0	112.4	109.3	107.0	106.1	106.1
61°	123.9	123.9	122.4	118.5	114.7	110.8	106.1	102.3	100.7	99.2	99.2
62°	118.5	117.0	116.2	112.4	108.4	103.9	100.0	96.0	93.8	92.2	93.0
63°	111.5	110.8	109.3	106.1	102.3	97.6	93.0	89.9	87.5	85.2	86.1
64°	106.1	105.4	103.0	100.0	96.0	91.5	86.8	83.7	82.1	79.8	79.0
65°	99.2	98.4	97.6	93.8	89.9	85.2	81.4	78.3	76.0	74.4	72.8
66°	93.0	93.8	92.2	89.1	84.5	80.5	75.1	72.0	70.6	68.2	66.6
67°	87.5	87.5	86.1	82.9	78.3	74.4	70.6	66.6	64.3	62.0	61.2
67.5°	84.5	84.5	82.9	79.0	76.0	71.3	67.4	64.3	61.2	59.6	58.1
68°	81.4	81.4	80.5	77.5	73.6	69.0	65.0	61.2	58.1	55.8	55.1
69°	76.0	76.7	75.1	72.0	68.2	63.6	59.6	56.6	53.5	51.1	49.6
70°	71.3	70.6	69.0	65.9	62.0	58.9	55.1	51.1	48.1	45.0	44.1
71°	65.0	65.0	63.6	61.2	57.3	53.5	49.6	46.5	43.4	39.5	38.7
72°	60.5	60.5	58.9	55.8	52.6	48.8	45.0	41.1	38.7	34.9	33.3
72.5°	57.3	58.1	56.6	53.5	50.4	45.7	42.7	39.5	35.7	32.6	31.0
73°	55.8	55.1	54.2	51.1	47.2	44.1	40.3	37.1	33.3	30.2	28.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	34.9	34.9	34.1	31.0	27.9	24.8	21.6	18.6	15.5	12.4	10.8
80°	24.0	24.8	23.2	21.6	19.4	16.2	13.2	10.8	7.7	6.3	4.7
82.5°	15.5	15.5	14.7	13.2	11.7	9.3	7.7	5.4	3.8	3.1	2.3
85°	7.7	8.5	7.7	7.0	5.4	4.7	3.8	2.3	1.6	0.7	0.7
87.5°	3.1	3.1	3.1	2.3	2.3	1.6	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°	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8	571.8
2.5°	569.5	569.5	567.9	567.1	566.4	565.7	564.8	564.1	564.1	564.8
5°	564.8	563.3	560.1	559.4	557.1	556.3	554.7	554.0	554.7	554.0
7.5°	557.8	554.7	550.9	549.3	546.2	544.7	542.3	542.3	540.8	541.6
10°	548.6	543.9	539.2	536.2	533.8	531.5	530.0	528.4	527.7	527.7
12.5°	536.9	531.5	526.8	522.3	518.3	516.9	513.7	513.7	512.2	511.3
15°	523.8	516.9	511.3	506.8	503.6	500.5	498.2	496.7	495.1	495.1
17.5°	506.8	500.5	495.1	489.7	485.0	482.7	480.4	478.0	478.0	476.5
20°	488.1	481.2	476.5	471.1	467.2	463.4	460.2	460.2	458.7	459.4
22.5°	467.2	458.7	454.0	450.1	446.3	443.2	440.1	440.1	439.3	438.5
25°	444.0	437.0	431.5	427.0	424.5	421.5	420.7	419.1	418.4	418.4
27.5°	419.1	413.7	406.8	404.5	401.3	399.8	399.8	399.1	397.5	398.2
30°	392.8	386.7	382.7	381.2	378.1	378.1	377.3	375.7	375.7	376.6
32.5°	367.2	361.1	358.0	357.2	354.1	354.1	353.3	354.1	354.1	354.8
35°	339.3	333.9	333.2	330.8	330.1	330.1	330.1	331.6	333.2	330.8
37.5°	313.0	309.2	306.9	306.0	306.9	306.9	307.6	309.9	309.2	308.4
40°	286.0	282.8	281.3	281.3	282.8	284.4	284.4	286.7	287.4	286.7
42.5°	258.8	256.5	256.5	257.2	258.8	259.5	261.9	264.2	265.0	265.8
45°	233.2	233.2	233.2	234.0	234.8	236.3	239.4	241.7	242.6	243.3
47.5°	208.4	207.7	210.0	210.7	213.1	213.8	216.1	219.2	220.1	220.8
50°	185.2	186.7	187.5	189.8	191.4	191.4	194.5	196.0	198.3	198.3
52.5°	163.5	165.8	166.6	168.9	169.7	170.4	172.0	174.3	175.9	175.9
55°	144.1	144.8	146.4	147.2	149.5	150.4	151.8	152.7	154.9	154.2
56°	135.6	137.1	137.9	139.4	141.0	141.8	143.4	144.1	145.7	146.4
57°	127.9	128.6	130.9	131.7	133.3	133.3	134.0	136.4	136.4	137.1
58°	120.1	121.6	122.4	123.2	124.8	125.5	127.1	127.9	128.6	127.9
59°	113.1	113.9	114.7	114.7	116.2	116.2	118.5	120.1	120.9	120.9
60°	106.1	106.1	107.0	107.7	109.3	110.0	110.0	111.5	111.5	111.5
61°	99.2	99.2	100.0	100.7	101.4	101.4	103.0	103.0	103.9	104.6
62°	93.0	92.2	92.2	93.0	93.0	94.5	95.3	96.0	96.9	96.0
63°	86.1	85.2	85.2	85.2	85.2	86.8	86.8	87.5	89.1	88.3
64°	78.3	78.3	78.3	78.3	79.0	79.0	80.5	81.4	82.1	82.9
65°	72.8	71.3	70.6	70.6	71.3	72.0	72.8	73.6	74.4	74.4
66°	66.6	65.0	64.3	64.3	64.3	64.3	65.9	65.9	67.4	67.4
67°	59.6	58.1	57.3	56.6	56.6	56.6	58.9	58.1	58.1	58.1
67.5°	57.3	55.1	54.2	53.5	52.6	54.2	53.5	54.2	54.2	53.5
68°	54.2	52.6	51.1	49.6	49.6	49.6	50.4	51.1	50.4	49.6
69°	48.1	47.2	45.0	43.4	42.7	43.4	42.7	43.4	42.7	43.4
70°	42.7	40.3	38.0	37.1	36.4	36.4	36.4	35.7	36.4	35.7
71°	37.1	34.9	32.6	31.0	30.2	30.2	29.4	30.2	29.4	30.2
72°	31.7	29.4	26.3	24.8	24.8	24.8	24.8	24.0	24.8	24.0
72.5°	29.4	26.3	24.0	22.5	21.6	21.6	21.6	21.6	20.9	21.6
73°	27.2	24.0	20.9	20.2	20.2	20.2	19.4	18.6	19.4	19.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	9.3	7.0	6.3	6.3	6.3	6.3	6.3	6.3	5.4	5.4
80°	3.8	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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°	50.4	50.4	48.8	46.5	42.7	38.7	35.7	32.6	28.7	24.8	23.2
75°	46.5	45.7	44.1	41.8	38.7	34.9	31.7	27.9	24.8	20.9	19.4





74°	22.5	18.6	17.1	15.5	15.5	15.5	14.7	14.7	14.7	15.5
75°	17.8	14.7	13.2	11.7	12.4	11.7	12.4	11.7	11.7	11.7



(END OF REPORT)