

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: P581439

Luminaire Tested: **HC407D010-HM40525830-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581439  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC407D010-HM40525830-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" 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: 877.2 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

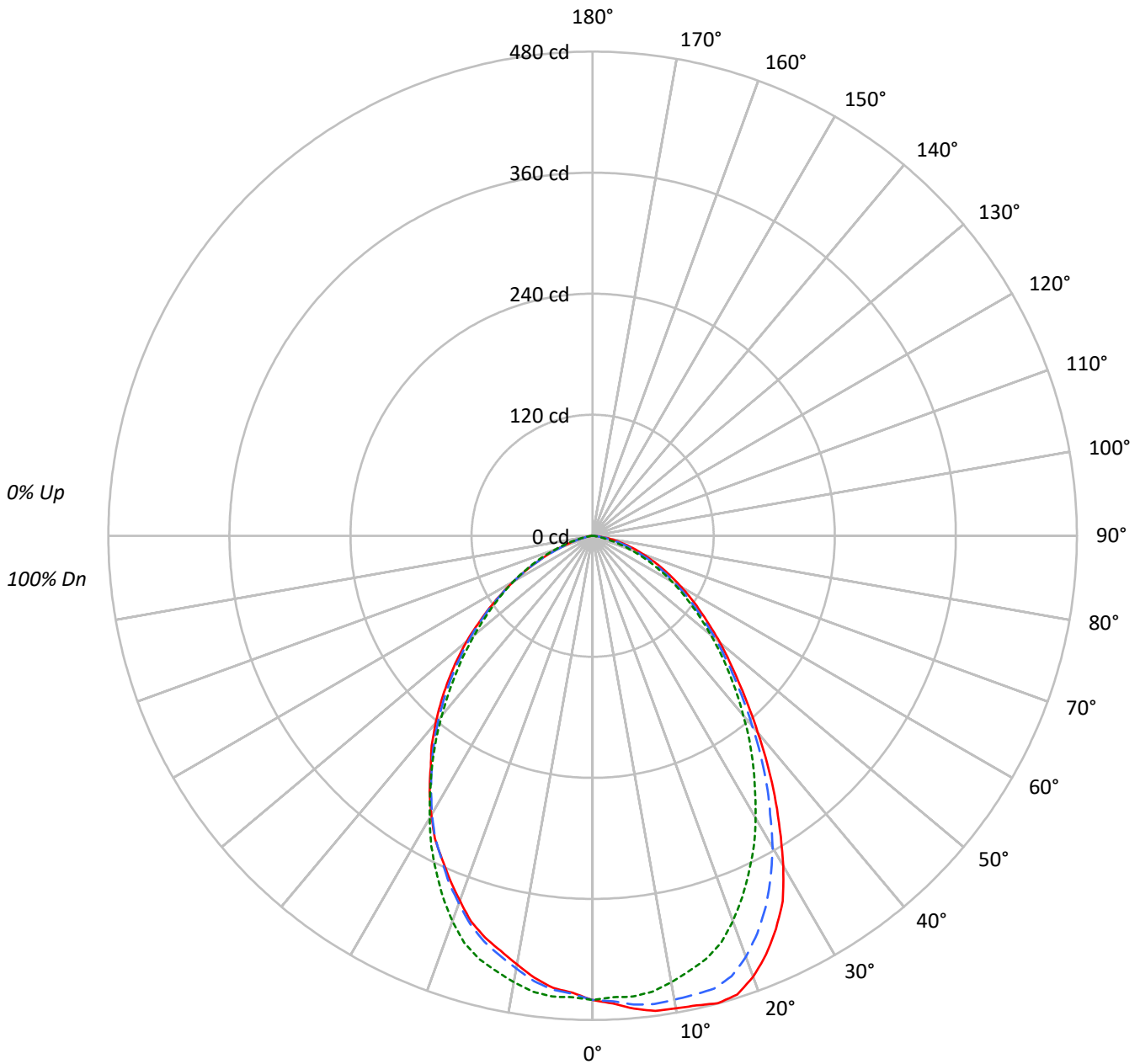
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	56764	56764	56764
5°	58268	56770	55718
10°	59581	56287	54057
15°	61256	55484	52637
20°	61076	53358	50509
25°	58508	49948	48083
30°	53823	46004	45520
35°	47341	41755	42101
40°	40979	37388	38934
45°	35620	33213	35201
50°	31605	29283	31278
55°	28021	25698	26795
60°	24965	22301	22301
65°	22181	18533	17337
70°	19150	14029	12370
75°	16060	9293	7625
80°	12217	4475	4049
85°	6510	1557	1557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	5.0
10°-20°	123.6	14.1
20°-30°	174.3	19.9
30°-40°	180.0	20.5
40°-50°	152.6	17.4
50°-60°	111.0	12.7
60°-70°	64.9	7.4
70°-80°	24.1	2.7
80°-90°	3.1	0.4
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°	341.4	38.9
0°-40°	521.4	59.4
0°-60°	785.1	89.5
0°-90°	877.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	877.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	460	460	460	460	460	
5°	471	466	458	452	450	45
15°	480	465	434	416	412	135
25°	430	406	367	354	353	197
35°	314	301	277	278	280	196
45°	204	198	190	197	202	159
55°	130	124	120	124	125	117
65°	76	70	64	59	59	75
75°	34	28	20	16	16	36
85°	5	3	1	1	1	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	460.2	460.2	460.2	460.2	460.2	460.2	460.2	460.2	460.2
2.5°	464.2	463.1	461.9	460.2	457.9	456.2	454.5	453.4	453.4
5°	470.6	468.9	466.5	462.5	458.5	455.1	451.7	450.0	450.0
7.5°	475.1	472.8	468.3	462.5	455.7	450.5	445.4	443.0	441.9
10°	475.7	473.4	467.0	458.5	449.4	441.3	435.6	432.2	431.6
12.5°	476.8	474.0	465.9	453.9	441.9	432.2	426.0	422.5	421.4
15°	479.7	475.7	464.8	449.4	434.5	423.1	416.2	413.3	412.2
17.5°	476.8	471.1	457.9	439.6	423.1	410.5	403.6	400.8	400.8
20°	465.3	459.6	444.3	424.2	406.5	394.4	387.6	385.9	384.8
22.5°	449.4	443.0	426.5	405.4	387.6	376.8	372.2	369.8	369.3
25°	429.9	423.7	405.9	384.2	367.0	357.9	353.9	353.9	353.3
27.5°	408.2	400.2	381.9	363.0	346.4	339.6	337.9	337.9	338.4
30°	377.9	372.2	356.8	338.4	323.0	318.4	318.4	319.6	319.6
32.5°	345.3	341.3	327.6	311.6	299.5	296.7	297.8	300.2	300.8
35°	314.4	309.9	300.8	286.4	277.3	276.2	277.9	279.6	279.6
37.5°	284.2	279.6	273.2	261.9	255.0	255.6	257.9	260.1	261.9
40°	254.5	250.9	246.4	237.3	232.2	234.4	237.3	239.5	241.8
42.5°	228.2	224.6	221.2	214.4	211.0	213.8	217.2	219.5	221.8
45°	204.2	201.8	198.4	192.7	190.4	193.2	197.2	199.5	201.8
47.5°	183.6	182.4	177.8	172.6	171.5	174.3	177.8	180.7	182.4
50°	164.7	163.0	159.0	153.7	152.6	157.3	159.5	161.3	163.0
52.5°	146.3	144.6	140.1	135.5	135.5	138.9	140.7	141.2	142.9
55°	130.3	128.6	124.0	120.6	119.5	122.3	123.5	123.5	124.6
57.5°	115.5	113.8	109.2	105.2	104.6	106.3	106.3	106.3	106.9
60°	101.2	99.5	94.9	91.5	90.4	90.9	90.4	89.8	90.4
62.5°	88.1	86.4	81.7	77.7	76.6	76.6	74.9	74.3	74.9
65°	76.0	73.2	69.8	65.8	63.5	61.8	59.4	59.4	59.4
67.5°	64.1	61.8	57.7	53.7	50.9	48.0	44.6	45.7	46.3
70°	53.1	51.4	46.9	42.9	38.9	35.4	32.5	33.7	34.3
72.5°	43.5	41.2	37.2	32.5	29.1	24.6	22.9	24.0	24.0
75°	33.7	31.4	28.0	23.4	19.5	15.5	15.5	16.0	16.0
77.5°	25.1	22.9	19.5	15.5	12.1	9.1	9.7	9.7	9.7
80°	17.2	15.5	12.6	9.1	6.3	5.1	5.1	5.1	5.7
82.5°	9.7	8.5	6.8	4.6	2.8	2.8	2.8	2.8	2.8
85°	4.6	3.4	2.8	1.7	1.1	1.1	1.1	1.1	1.1
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)