

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: P581513

Luminaire Tested: **HC407D010-HM40525930-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581513  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC407D010-HM40525930-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 762.9 lumens  
Efficiency: N/A  
Efficacy: 95.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

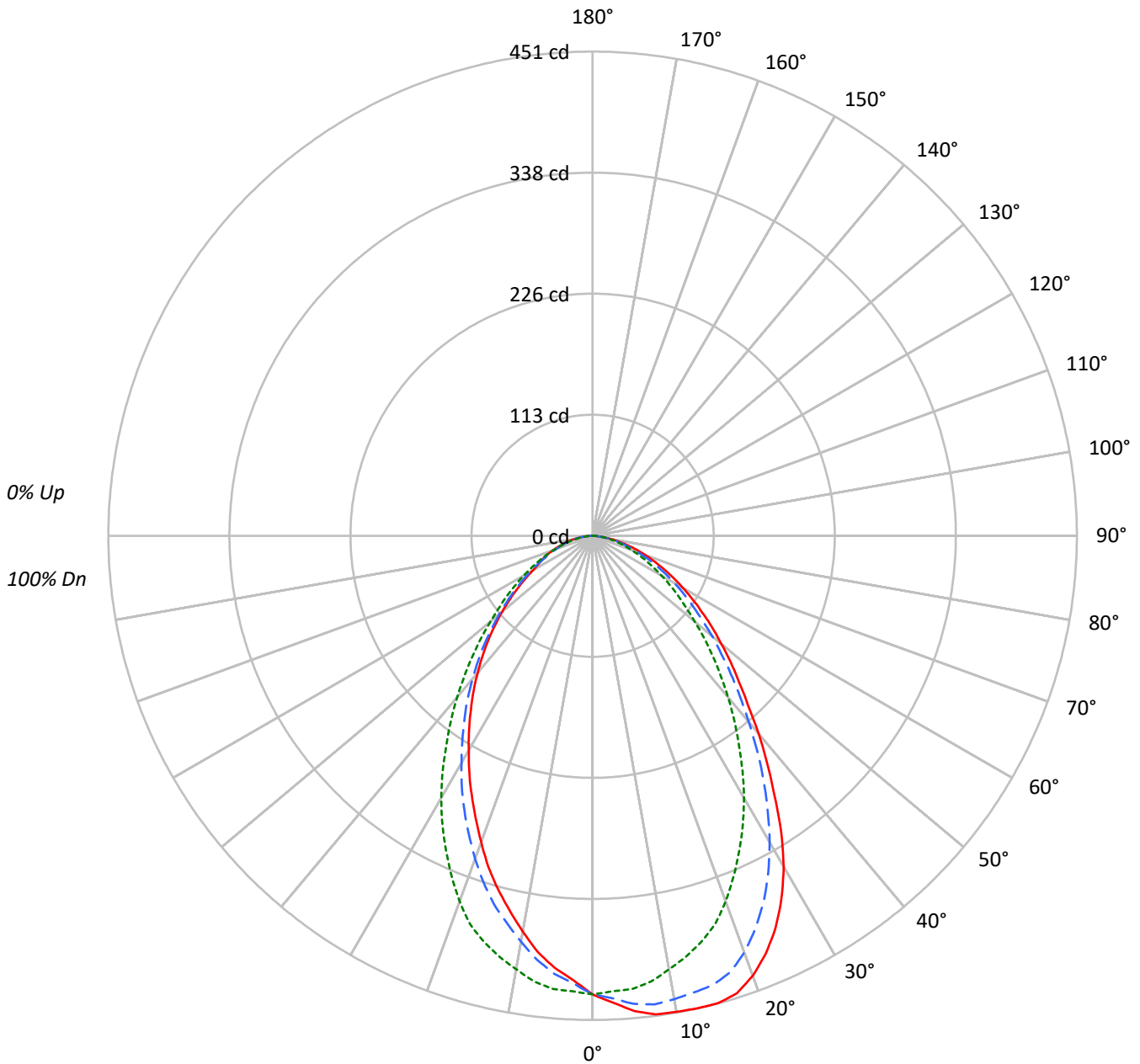
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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				
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				76				
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66				66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35				35				
10	59	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°	52693	52693	52693
5°	55012	52461	50034
10°	56399	51364	46893
15°	57566	49993	43506
20°	57256	47556	39838
25°	54861	43986	36256
30°	50690	40150	32858
35°	44420	35717	29754
40°	38676	31559	26793
45°	33666	27526	23933
50°	29973	23718	21108
55°	26795	20860	18257
60°	23929	18230	15739
65°	21247	15965	14943
70°	18681	13776	13957
75°	15774	11724	12915
80°	12146	10016	11791
85°	7076	7925	10048



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	5.2
10°-20°	110.5	14.5
20°-30°	150.9	19.8
30°-40°	151.5	19.9
40°-50°	125.4	16.4
50°-60°	90.8	11.9
60°-70°	57.5	7.5
70°-80°	29.1	3.8
80°-90°	7.1	0.9
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°	301.4	39.5
0°-40°	452.9	59.4
0°-60°	669.1	87.7
0°-90°	762.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	762.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	427	427	427	427	427	
5°	444	438	424	410	404	43
15°	451	433	392	355	341	127
25°	403	376	323	282	266	184
35°	295	277	237	208	198	185
45°	193	182	158	142	137	150
55°	125	114	97	88	85	112
65°	73	65	55	49	51	73
75°	33	29	25	26	27	35
85°	5	5	6	6	7	7
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°	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2
2.5°	435.2	433.7	431.2	428.2	424.7	420.6	417.1	415.1	414.1
5°	444.3	442.2	437.7	431.2	423.7	416.2	409.6	405.6	404.1
7.5°	449.7	446.8	440.3	430.2	418.7	407.6	398.1	392.5	391.0
10°	450.3	446.8	438.2	424.7	410.1	395.6	384.0	375.9	374.4
12.5°	450.8	446.3	435.7	419.7	401.6	383.5	369.4	359.8	357.3
15°	450.8	446.3	433.2	414.1	391.5	370.9	355.3	344.2	340.7
17.5°	446.8	441.8	426.2	404.1	379.4	356.3	338.2	326.7	323.2
20°	436.2	430.7	413.1	389.0	362.3	338.2	320.1	308.1	303.5
22.5°	421.2	414.6	396.0	369.8	343.2	318.6	301.0	288.5	284.5
25°	403.1	396.5	376.5	350.7	323.2	300.0	282.5	270.8	266.4
27.5°	380.9	373.9	354.3	328.7	303.0	279.9	263.8	253.3	248.8
30°	355.9	348.2	329.7	305.1	281.9	259.8	244.2	235.7	230.7
32.5°	326.7	320.1	303.5	281.4	259.8	238.8	225.7	218.2	214.1
35°	295.0	291.4	277.4	258.3	237.2	219.6	208.0	201.0	197.6
37.5°	266.9	263.3	251.3	235.2	216.6	200.5	191.0	184.9	182.0
40°	240.2	237.2	225.7	212.1	196.0	182.0	173.9	169.3	166.4
42.5°	214.1	212.6	203.0	190.5	176.4	164.3	157.8	154.3	151.8
45°	193.0	191.0	182.0	169.9	157.8	147.7	142.2	139.7	137.2
47.5°	174.3	171.8	162.3	151.8	140.8	131.7	126.7	124.2	123.1
50°	156.2	153.7	145.2	134.7	123.6	117.1	113.1	110.6	110.0
52.5°	140.2	137.7	128.1	118.1	109.6	104.0	100.5	98.0	97.0
55°	124.6	121.7	113.6	104.0	97.0	92.0	88.4	85.9	84.9
57.5°	110.6	107.5	100.5	91.5	84.9	80.5	77.4	74.9	73.9
60°	97.0	94.5	88.0	79.4	73.9	69.9	66.8	64.9	63.8
62.5°	84.4	82.4	75.9	68.4	63.8	60.3	57.8	55.8	56.8
65°	72.8	70.9	64.9	58.3	54.7	51.2	49.3	49.3	51.2
67.5°	61.8	59.9	54.7	49.3	46.2	43.7	42.2	43.7	45.2
70°	51.8	49.7	45.2	40.7	38.2	36.2	36.2	37.7	38.7
72.5°	42.2	40.2	36.6	33.1	31.2	29.7	31.2	32.2	33.1
75°	33.1	31.6	28.7	26.2	24.6	24.1	25.6	26.6	27.1
77.5°	24.6	23.7	21.6	19.6	18.5	19.1	20.6	21.1	21.6
80°	17.1	16.6	15.0	14.1	14.1	14.6	15.6	16.0	16.6
82.5°	10.6	10.6	9.6	9.0	9.6	10.6	11.0	11.6	11.6
85°	5.0	5.6	5.0	5.0	5.6	6.5	6.5	7.1	7.1
87.5°	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5	3.0
90°	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°







(END OF REPORT)