

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: P581474

Luminaire Tested: **HC407D010-HM40525840-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581474  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC407D010-HM40525840-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 939.2 lumens  
Efficiency: N/A  
Efficacy: 117.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

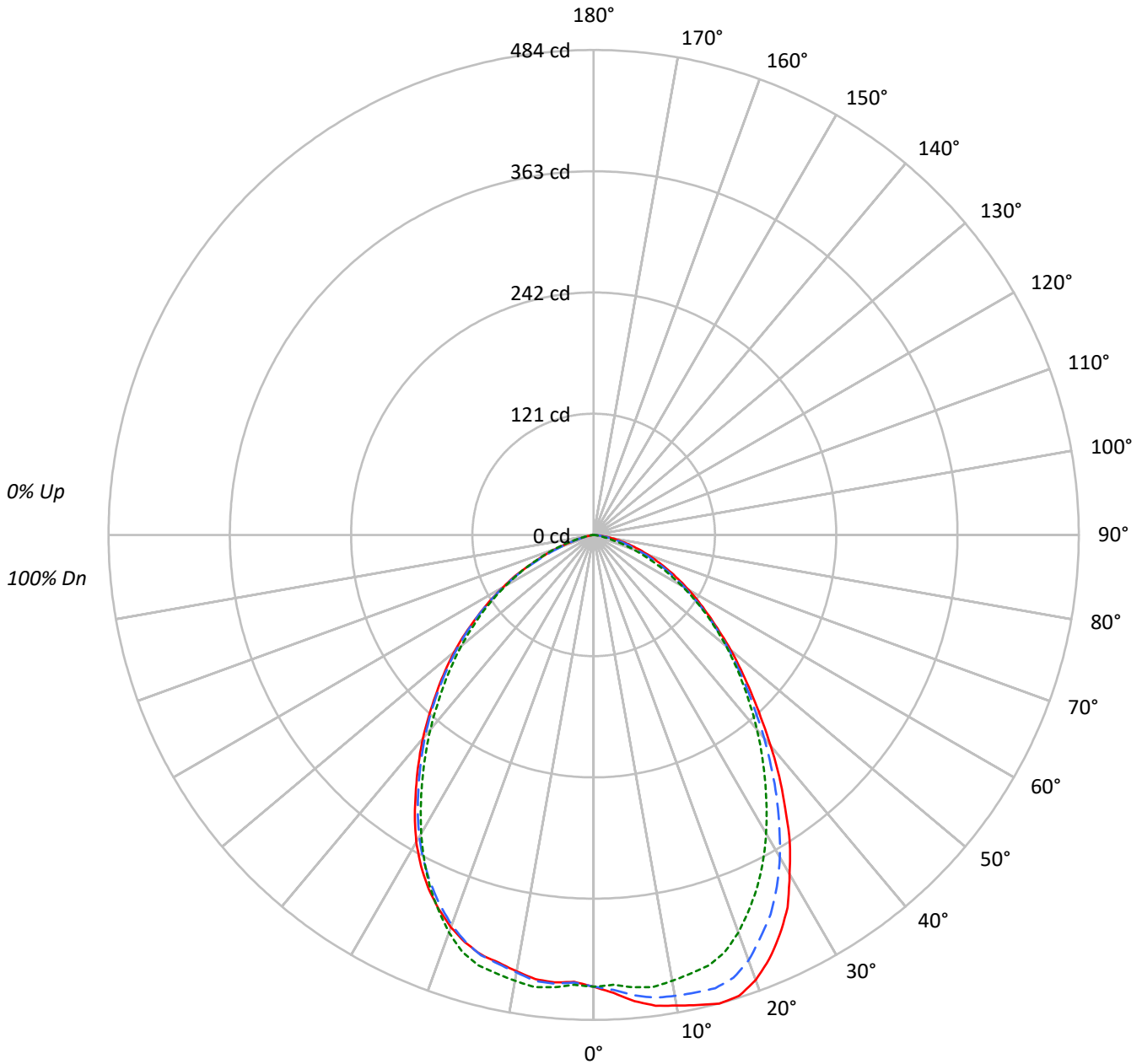
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76				
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46				
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41				
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

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

	0°	90°	180°
0°	55604	55604	55604
5°	57835	56114	55507
10°	59731	56600	55385
15°	61831	56774	55382
20°	62034	55406	54684
25°	59842	52642	53051
30°	55689	49009	50405
35°	50172	44842	46513
40°	44231	40802	42653
45°	38673	36771	38568
50°	34233	33082	34828
55°	30128	29225	30386
60°	26889	24940	25681
65°	23641	20255	19905
70°	20629	14930	13632
75°	17157	9007	7244
80°	12999	3481	2202
85°	5944	849	849



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	4.6
10°-20°	126.9	13.5
20°-30°	183.7	19.6
30°-40°	193.8	20.6
40°-50°	167.8	17.9
50°-60°	124.3	13.2
60°-70°	71.6	7.6
70°-80°	25.0	2.7
80°-90°	2.6	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°	354.1	37.7
0°-40°	547.9	58.3
0°-60°	840.0	89.4
0°-90°	939.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	939.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	451	451	451	451	451	
5°	467	461	453	450	448	45
15°	484	468	445	434	434	136
25°	440	418	387	384	390	201
35°	333	318	298	304	309	208
45°	222	216	211	219	221	172
55°	140	137	136	141	141	126
65°	81	76	69	66	68	81
75°	36	30	19	15	15	39
85°	4	2	1	1	1	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°	450.8	450.8	450.8	450.8	450.8	450.8	450.8	450.8	450.8
2.5°	457.5	456.2	454.4	451.9	449.5	447.7	447.1	446.4	446.4
5°	467.1	464.8	461.1	456.2	453.2	451.3	449.5	448.3	448.3
7.5°	473.9	471.5	465.9	459.3	455.0	451.3	448.9	447.1	447.1
10°	476.9	473.9	467.1	458.6	451.9	447.1	443.4	442.2	442.2
12.5°	480.6	476.9	467.8	456.8	448.3	442.2	438.6	437.3	437.3
15°	484.2	480.0	468.4	455.5	444.6	437.3	434.3	433.7	433.7
17.5°	482.4	476.9	463.5	448.3	436.1	428.8	425.7	425.7	426.4
20°	472.6	467.1	451.9	434.8	422.1	416.6	414.2	415.4	416.6
22.5°	458.0	451.3	434.8	418.4	405.0	400.1	400.1	401.9	403.9
25°	439.7	433.7	417.9	399.6	386.8	383.2	384.3	387.4	389.8
27.5°	419.0	412.3	395.9	378.8	366.1	364.3	367.2	371.6	372.8
30°	391.0	385.6	371.6	355.1	344.1	343.6	347.8	350.8	353.9
32.5°	364.3	358.1	344.7	328.9	321.0	321.6	326.5	330.1	332.0
35°	333.2	327.6	318.0	305.1	297.8	299.1	304.5	308.2	308.9
37.5°	304.0	300.3	290.5	280.7	275.3	277.8	282.6	286.9	286.9
40°	274.7	271.6	264.4	256.4	253.4	256.4	261.3	264.9	264.9
42.5°	246.7	244.9	238.8	233.3	231.5	235.7	240.0	243.1	242.4
45°	221.7	219.9	215.7	211.3	210.8	215.0	218.6	220.5	221.1
47.5°	199.1	197.9	194.3	191.3	191.3	195.5	198.6	200.4	201.0
50°	178.4	177.2	174.2	171.7	172.4	176.6	179.1	180.9	181.5
52.5°	157.7	157.2	154.7	151.7	153.5	156.6	159.5	160.8	161.4
55°	140.1	140.1	137.0	134.6	135.9	138.8	140.7	141.3	141.3
57.5°	124.3	123.7	119.9	117.6	118.1	121.2	122.4	123.0	123.0
60°	109.0	108.5	104.8	101.1	101.1	103.0	103.6	104.1	104.1
62.5°	94.5	93.8	89.6	86.5	85.2	84.7	84.7	85.9	88.3
65°	81.0	80.3	76.1	71.2	69.4	67.6	65.8	67.0	68.2
67.5°	68.8	67.6	63.4	59.1	54.9	51.8	48.7	50.5	53.0
70°	57.2	56.0	51.2	46.3	41.4	36.5	34.1	36.5	37.8
72.5°	46.3	45.1	40.2	35.3	29.2	24.4	23.8	24.4	24.9
75°	36.0	35.3	30.5	24.9	18.9	15.2	15.2	15.2	15.2
77.5°	26.7	25.6	20.7	15.8	10.9	8.5	8.0	8.0	8.0
80°	18.3	17.1	12.7	9.1	4.9	3.6	3.6	3.1	3.1
82.5°	10.4	9.8	6.7	3.6	1.8	1.3	1.3	1.3	1.3
85°	4.2	3.6	2.4	1.3	0.6	0.6	0.6	0.6	0.6
87.5°	0.6	0.6	0.6	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



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







(END OF REPORT)