

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: P579714

Luminaire Tested: **HC410D010-HM40525830-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579714  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC410D010-HM40525830-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1055.4 lumens  
Efficiency: N/A  
Efficacy: 106.6 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

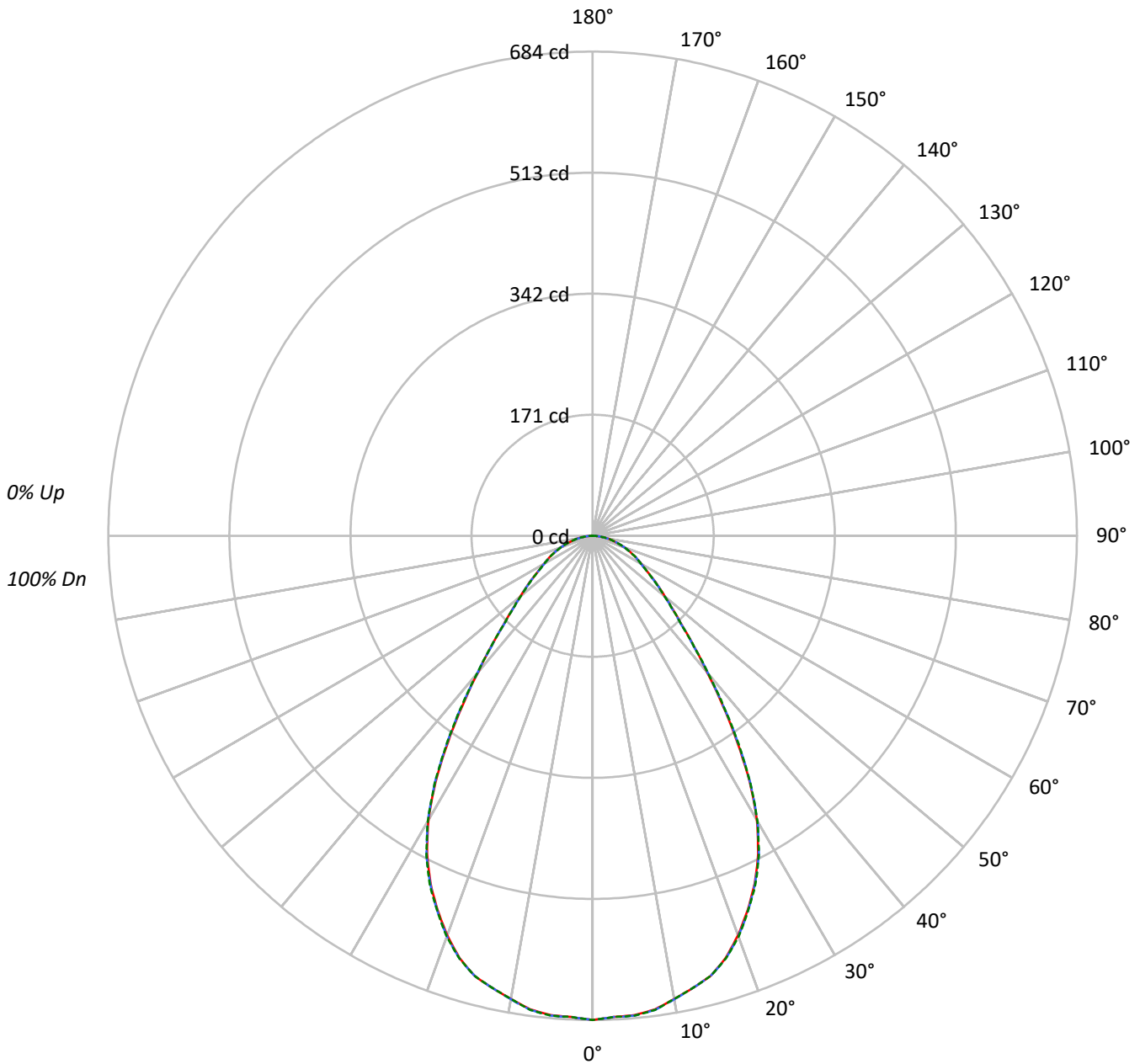
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78			78
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69			69
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62			62
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56			56
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51			51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46			46
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42			42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39			39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36			36

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

	0°	45°	90°
0°	84381	84381	84381
5°	84171	84257	84257
10°	83203	83278	83203
15°	82211	82211	82211
20°	78823	79006	79111
25°	73724	73833	74023
30°	66058	66257	66257
35°	53636	54057	54163
40°	40479	40721	40818
45°	31015	30893	30893
50°	25541	25426	25426
55°	21935	21784	21784
60°	19563	19390	19390
65°	18387	18387	18387
70°	17130	17130	17130
75°	15489	15822	15489
80°	14562	14064	14562
85°	12029	12029	12029



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.5	6.1
10°-20°	180.4	17.1
20°-30°	247.9	23.5
30°-40°	222.8	21.1
40°-50°	140.8	13.3
50°-60°	92.0	8.7
60°-70°	62.3	5.9
70°-80°	35.0	3.3
80°-90°	9.8	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°	492.7	46.7
0°-40°	715.5	67.8
0°-60°	948.3	89.9
0°-90°	1055.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1055.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	684	684	684	684	684	
5°	680	680	680	680	680	64
15°	644	644	644	644	644	180
25°	542	542	542	544	544	247
35°	356	358	359	360	360	222
45°	178	177	177	177	177	141
55°	102	102	101	102	101	92
65°	63	63	63	63	63	62
75°	32	33	33	33	32	35
85°	8	8	8	8	8	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	684.1	684.1	684.1	684.1	684.1
2.5°	680.5	680.5	680.5	680.5	680.5
5°	679.8	679.8	680.5	680.5	680.5
7.5°	674.8	675.6	675.6	675.6	675.6
10°	664.3	664.3	664.9	664.9	664.3
12.5°	654.3	654.3	654.3	655.0	654.3
15°	643.8	643.8	643.8	643.8	643.8
17.5°	625.3	626.0	626.0	626.0	626.0
20°	600.5	601.9	601.9	602.7	602.7
22.5°	572.2	572.9	573.6	574.3	573.6
25°	541.7	542.5	542.5	543.9	543.9
27.5°	506.3	507.1	508.5	508.5	508.5
30°	463.8	464.5	465.2	465.2	465.2
32.5°	413.5	413.5	415.0	415.7	415.0
35°	356.2	357.7	359.0	360.4	359.7
37.5°	301.7	303.0	303.8	303.8	304.5
40°	251.4	252.9	252.9	254.2	253.5
42.5°	211.8	211.0	211.0	212.5	211.8
45°	177.8	177.1	177.1	177.1	177.1
47.5°	152.9	152.3	152.3	152.3	152.3
50°	133.1	132.5	132.5	132.5	132.5
52.5°	116.9	116.2	116.2	116.2	115.4
55°	102.0	102.0	101.3	102.0	101.3
57.5°	88.5	88.5	88.5	88.5	88.5
60°	79.3	78.6	78.6	78.6	78.6
62.5°	70.8	70.8	70.8	70.8	70.8
65°	63.0	63.0	63.0	63.0	63.0
67.5°	55.2	54.5	55.2	55.2	54.5
70°	47.5	46.8	47.5	47.5	47.5
72.5°	39.6	39.6	39.6	40.4	39.6
75°	32.5	33.2	33.2	33.2	32.5
77.5°	26.2	26.9	26.2	26.2	26.2
80°	20.5	19.8	19.8	19.8	20.5
82.5°	14.1	14.1	14.1	14.1	14.1
85°	8.5	8.5	8.5	8.5	8.5
87.5°	3.5	3.5	3.5	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)