

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: P592614

Luminaire Tested: **HC410D010-HM40525850-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592614  
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-HM40525850-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

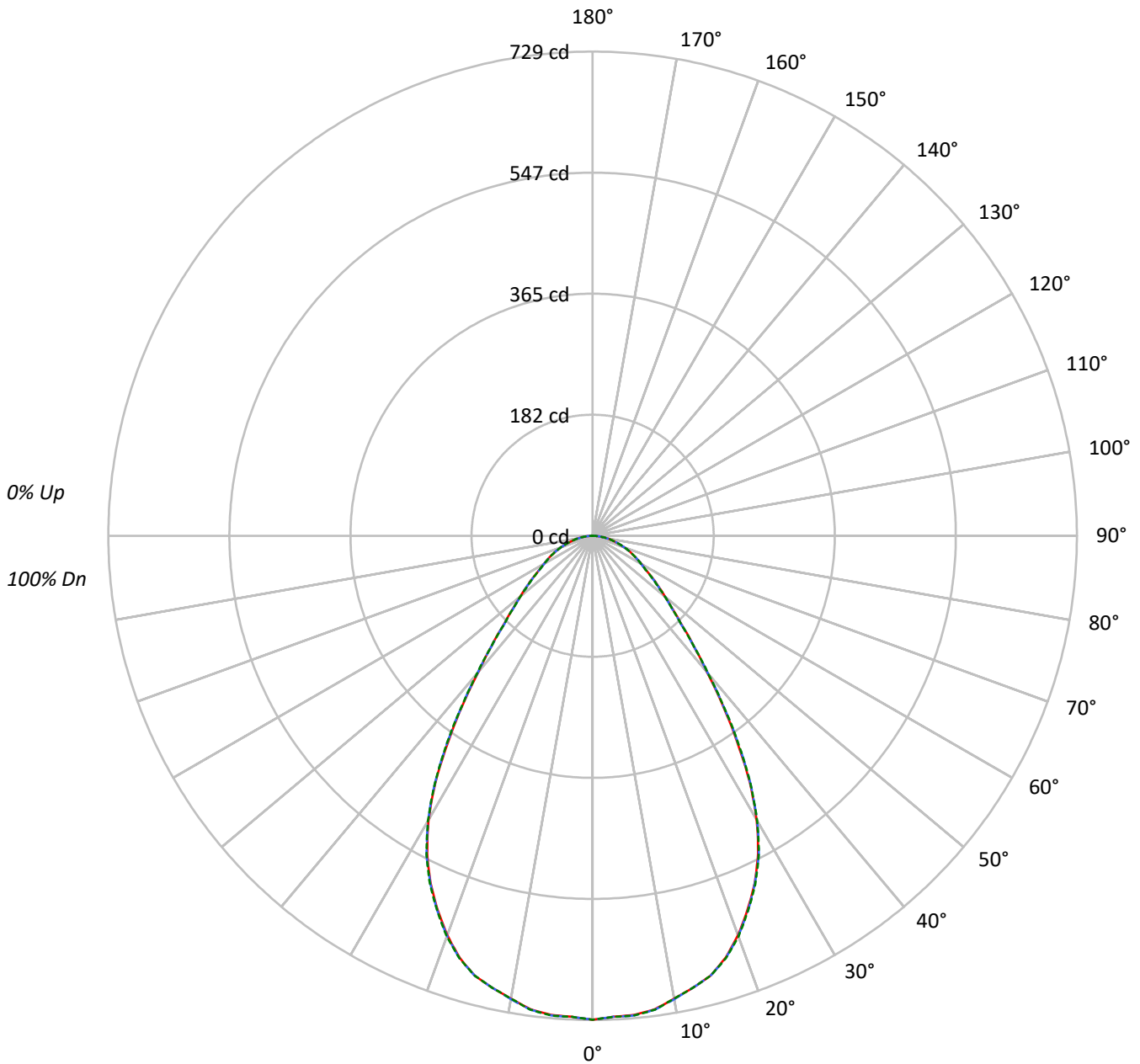
Lumens per Lamp: N/A  
Luminaire Lumens: 1124.3 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	89882	89882	89882
5°	89656	89755	89755
10°	88613	88713	88613
15°	87549	87549	87549
20°	83968	84152	84257
25°	78541	78637	78855
30°	70373	70587	70587
35°	57129	57596	57701
40°	43120	43362	43474
45°	33038	32899	32899
50°	27210	27057	27057
55°	23354	23204	23204
60°	20821	20673	20673
65°	19584	19584	19584
70°	18212	18212	18212
75°	16537	16918	16537
80°	15485	15059	15485
85°	12879	12879	12879



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	6.1
10°-20°	192.1	17.1
20°-30°	264.0	23.5
30°-40°	237.4	21.1
40°-50°	150.0	13.3
50°-60°	97.9	8.7
60°-70°	66.3	5.9
70°-80°	37.3	3.3
80°-90°	10.5	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°	524.8	46.7
0°-40°	762.2	67.8
0°-60°	1010.1	89.8
0°-90°	1124.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1124.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	729	729	729	729	729	
5°	724	724	725	725	725	69
15°	686	686	686	686	686	192
25°	577	578	578	579	579	263
35°	379	381	382	384	383	236
45°	189	189	189	189	189	150
55°	109	109	108	109	108	98
65°	67	67	67	67	67	66
75°	35	36	36	36	35	37
85°	9	9	9	9	9	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	728.7	728.7	728.7	728.7	728.7
2.5°	724.9	724.9	724.9	724.9	724.9
5°	724.1	724.1	724.9	724.9	724.9
7.5°	718.9	719.6	719.6	719.6	719.6
10°	707.5	707.5	708.3	708.3	707.5
12.5°	697.0	697.0	697.0	697.7	697.0
15°	685.6	685.6	685.6	685.6	685.6
17.5°	666.1	666.8	666.8	666.8	666.8
20°	639.7	641.1	641.1	641.9	641.9
22.5°	609.5	610.2	611.0	611.8	611.0
25°	577.1	577.8	577.8	579.4	579.4
27.5°	539.3	540.1	541.6	541.6	541.6
30°	494.1	494.8	495.6	495.6	495.6
32.5°	440.5	440.5	442.0	442.8	442.0
35°	379.4	380.9	382.5	384.0	383.2
37.5°	321.4	322.9	323.6	323.6	324.3
40°	267.8	269.3	269.3	270.8	270.0
42.5°	225.6	224.8	224.8	226.2	225.6
45°	189.4	188.6	188.6	188.6	188.6
47.5°	163.0	162.2	162.2	162.2	162.2
50°	141.8	141.0	141.0	141.0	141.0
52.5°	124.5	123.7	123.7	123.7	122.9
55°	108.6	108.6	107.9	108.6	107.9
57.5°	94.3	94.3	94.3	94.3	94.3
60°	84.4	83.8	83.8	83.8	83.8
62.5°	75.4	75.4	75.4	75.4	75.4
65°	67.1	67.1	67.1	67.1	67.1
67.5°	58.8	58.0	58.8	58.8	58.0
70°	50.5	49.7	50.5	50.5	50.5
72.5°	42.2	42.2	42.2	43.0	42.2
75°	34.7	35.5	35.5	35.5	34.7
77.5°	27.9	28.7	27.9	27.9	27.9
80°	21.8	21.2	21.2	21.2	21.8
82.5°	15.1	15.1	15.1	15.1	15.1
85°	9.1	9.1	9.1	9.1	9.1
87.5°	3.8	3.8	3.8	3.8	3.8
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)