

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: P579840

Luminaire Tested: **HC415D010-HM40525827-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579840  
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: HC415D010-HM40525827-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1324.9 lumens  
Efficiency: N/A  
Efficacy: 94.6 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

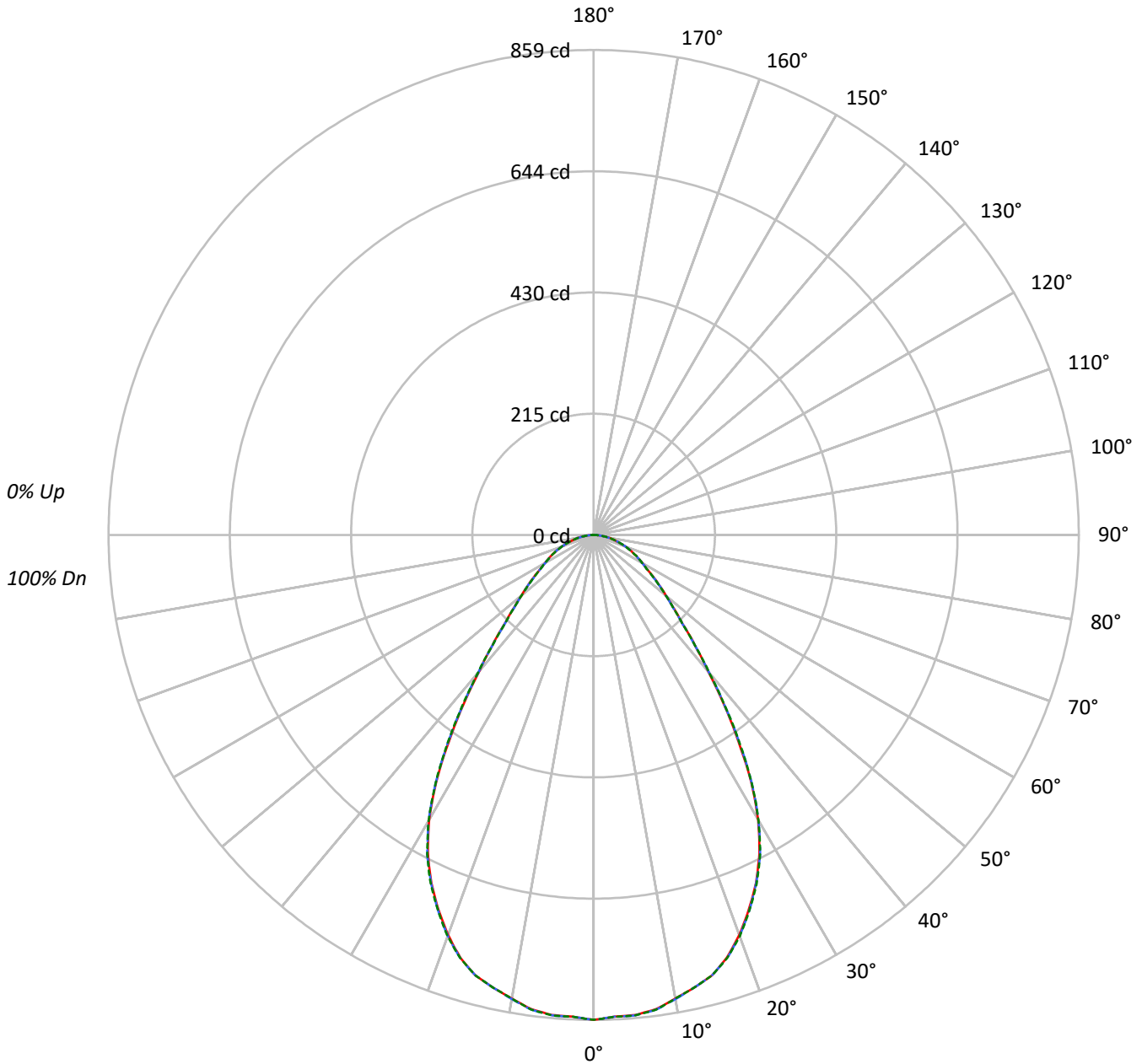
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot



0% Up  
100% Dn



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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																			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89																			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78																			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69																			
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56																			
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51																			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46																			
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39																			
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36																			

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

	0°	45°	90°
0°	105929	105929	105929
5°	105665	105764	105764
10°	104445	104545	104445
15°	103192	103192	103192
20°	98945	99194	99286
25°	92546	92668	92913
30°	82935	83192	83192
35°	67338	67865	68001
40°	50817	51090	51235
45°	38917	38777	38777
50°	32065	31892	31892
55°	27526	27332	27332
60°	24570	24348	24348
65°	23086	23086	23086
70°	21494	21494	21494
75°	19492	19873	19492
80°	18326	17687	18326
85°	15143	15143	15143



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.9	6.1
10°-20°	226.4	17.1
20°-30°	311.1	23.5
30°-40°	279.8	21.1
40°-50°	176.8	13.3
50°-60°	115.4	8.7
60°-70°	78.2	5.9
70°-80°	44.0	3.3
80°-90°	12.3	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°	618.5	46.7
0°-40°	898.2	67.8
0°-60°	1190.4	89.8
0°-90°	1324.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1324.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	859	859	859	859	859	
5°	853	853	854	854	854	81
15°	808	808	808	808	808	226
25°	680	681	681	683	683	310
35°	447	449	451	452	452	278
45°	223	222	222	222	222	177
55°	128	128	127	128	127	116
65°	79	79	79	79	79	78
75°	41	42	42	42	41	44
85°	11	11	11	11	11	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	858.8	858.8	858.8	858.8	858.8
2.5°	854.2	854.2	854.2	854.2	854.2
5°	853.4	853.4	854.2	854.2	854.2
7.5°	847.2	848.1	848.1	848.1	848.1
10°	833.9	833.9	834.7	834.7	833.9
12.5°	821.4	821.4	821.4	822.3	821.4
15°	808.1	808.1	808.1	808.1	808.1
17.5°	785.0	785.8	785.8	785.8	785.8
20°	753.8	755.7	755.7	756.4	756.4
22.5°	718.2	719.2	720.1	721.0	720.1
25°	680.0	680.9	680.9	682.7	682.7
27.5°	635.6	636.5	638.3	638.3	638.3
30°	582.3	583.2	584.1	584.1	584.1
32.5°	519.2	519.2	521.0	521.8	521.0
35°	447.2	448.9	450.7	452.5	451.6
37.5°	378.7	380.4	381.3	381.3	382.3
40°	315.6	317.3	317.3	319.2	318.2
42.5°	265.8	264.9	264.9	266.6	265.8
45°	223.1	222.3	222.3	222.3	222.3
47.5°	192.0	191.1	191.1	191.1	191.1
50°	167.1	166.2	166.2	166.2	166.2
52.5°	146.7	145.8	145.8	145.8	144.9
55°	128.0	128.0	127.1	128.0	127.1
57.5°	111.1	111.1	111.1	111.1	111.1
60°	99.6	98.7	98.7	98.7	98.7
62.5°	88.9	88.9	88.9	88.9	88.9
65°	79.1	79.1	79.1	79.1	79.1
67.5°	69.4	68.4	69.4	69.4	68.4
70°	59.6	58.7	59.6	59.6	59.6
72.5°	49.8	49.8	49.8	50.7	49.8
75°	40.9	41.7	41.7	41.7	40.9
77.5°	32.9	33.8	32.9	32.9	32.9
80°	25.8	24.9	24.9	24.9	25.8
82.5°	17.7	17.7	17.7	17.7	17.7
85°	10.7	10.7	10.7	10.7	10.7
87.5°	4.4	4.4	4.4	4.4	4.4
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)