

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: P579894

Luminaire Tested: **HC415D010-HM40525840-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579894  
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-HM40525840-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1528.5 lumens  
Efficiency: N/A  
Efficacy: 109.2 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

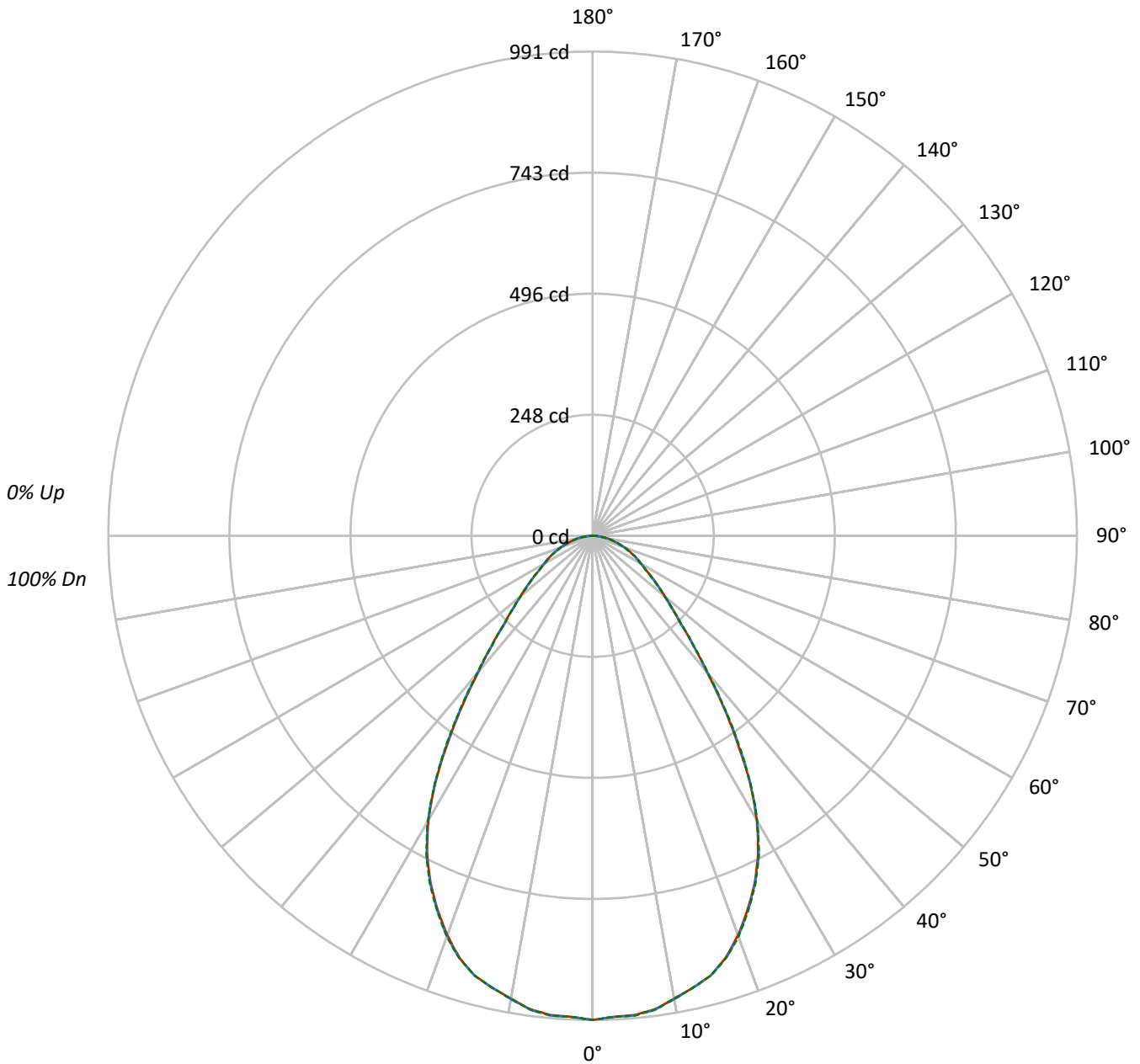
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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°	122199	122199	122199
5°	121898	122034	122034
10°	120489	120614	120489
15°	119039	119039	119039
20°	114158	114421	114565
25°	106768	106918	107190
30°	95668	95967	95967
35°	77683	78300	78451
40°	58626	58948	59109
45°	44900	44726	44726
50°	36997	36805	36805
55°	31762	31547	31547
60°	28320	28073	28073
65°	26647	26647	26647
70°	24776	24776	24776
75°	22494	22971	22494
80°	21168	20457	21168
85°	17407	17407	17407



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.3	6.1
10°-20°	261.2	17.1
20°-30°	358.9	23.5
30°-40°	322.8	21.1
40°-50°	203.9	13.3
50°-60°	133.1	8.7
60°-70°	90.2	5.9
70°-80°	50.8	3.3
80°-90°	14.3	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°	713.5	46.7
0°-40°	1036.2	67.8
0°-60°	1373.3	89.8
0°-90°	1528.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1528.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	984	984	986	986	986	93
15°	932	932	932	932	932	261
25°	784	786	786	788	788	358
35°	516	518	520	522	521	321
45°	257	256	256	256	256	204
55°	148	148	147	148	147	134
65°	91	91	91	91	91	90
75°	47	48	48	48	47	51
85°	12	12	12	12	12	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	990.7	990.7	990.7	990.7	990.7
2.5°	985.6	985.6	985.6	985.6	985.6
5°	984.5	984.5	985.6	985.6	985.6
7.5°	977.4	978.4	978.4	978.4	978.4
10°	962.0	962.0	963.0	963.0	962.0
12.5°	947.6	947.6	947.6	948.6	947.6
15°	932.2	932.2	932.2	932.2	932.2
17.5°	905.6	906.6	906.6	906.6	906.6
20°	869.7	871.7	871.7	872.8	872.8
22.5°	828.6	829.7	830.7	831.7	830.7
25°	784.5	785.6	785.6	787.6	787.6
27.5°	733.3	734.3	736.3	736.3	736.3
30°	671.7	672.8	673.8	673.8	673.8
32.5°	599.0	599.0	601.0	602.0	601.0
35°	515.9	517.9	520.0	522.0	521.0
37.5°	436.9	439.0	440.0	440.0	441.0
40°	364.1	366.1	366.1	368.2	367.1
42.5°	306.6	305.6	305.6	307.7	306.6
45°	257.4	256.4	256.4	256.4	256.4
47.5°	221.5	220.5	220.5	220.5	220.5
50°	192.8	191.8	191.8	191.8	191.8
52.5°	169.2	168.2	168.2	168.2	167.1
55°	147.7	147.7	146.7	147.7	146.7
57.5°	128.1	128.1	128.1	128.1	128.1
60°	114.8	113.8	113.8	113.8	113.8
62.5°	102.6	102.6	102.6	102.6	102.6
65°	91.3	91.3	91.3	91.3	91.3
67.5°	80.0	79.0	80.0	80.0	79.0
70°	68.7	67.7	68.7	68.7	68.7
72.5°	57.4	57.4	57.4	58.4	57.4
75°	47.2	48.2	48.2	48.2	47.2
77.5°	38.0	39.0	38.0	38.0	38.0
80°	29.8	28.8	28.8	28.8	29.8
82.5°	20.5	20.5	20.5	20.5	20.5
85°	12.3	12.3	12.3	12.3	12.3
87.5°	5.1	5.1	5.1	5.1	5.1
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)