

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: P579931

Luminaire Tested: **HC415D010-HM40525930-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579931  
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: HC415D010-HM40525930-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1305.1 lumens  
Efficiency: N/A  
Efficacy: 93.2 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

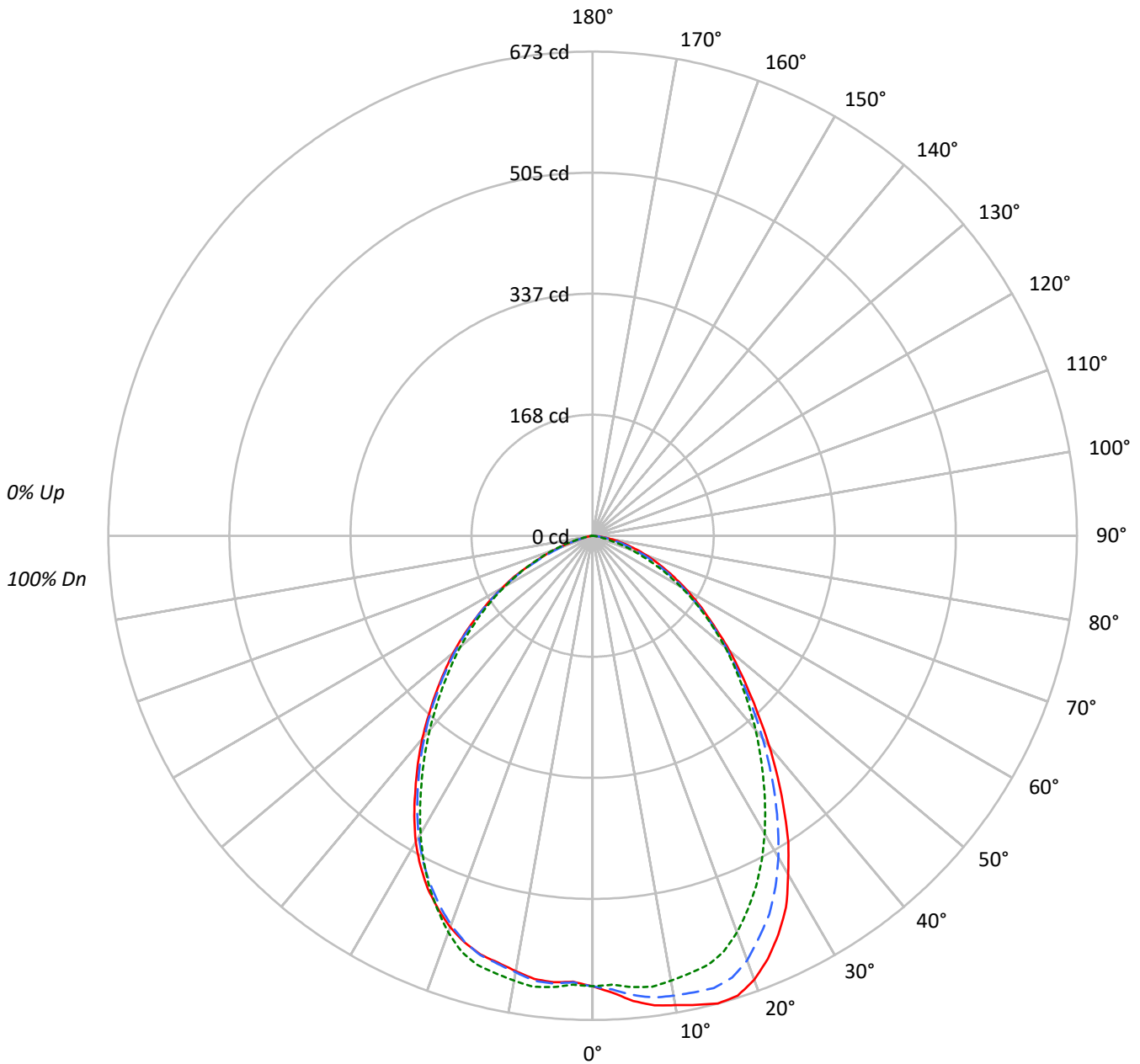
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	62	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°	77251	77251	77251
5°	80369	77967	77138
10°	82990	78656	76953
15°	85927	78891	76950
20°	86200	76998	76001
25°	83155	73152	73724
30°	77395	68109	70046
35°	69717	62324	64613
40°	61460	56694	59286
45°	53744	51093	53587
50°	47589	45977	48395
55°	41870	40579	42235
60°	37349	34660	35696
65°	32864	28165	27668
70°	28707	20737	18934
75°	23781	12534	10056
80°	18042	4830	2983
85°	8350	1132	1132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.4	4.6
10°-20°	176.3	13.5
20°-30°	255.3	19.6
30°-40°	269.4	20.6
40°-50°	233.1	17.9
50°-60°	172.7	13.2
60°-70°	99.6	7.6
70°-80°	34.8	2.7
80°-90°	3.6	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°	492.0	37.7
0°-40°	761.4	58.3
0°-60°	1167.2	89.4
0°-90°	1305.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1305.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	626	626	626	626	626	
5°	649	641	630	625	623	62
15°	673	651	618	603	603	189
25°	611	581	538	534	542	280
35°	463	442	414	423	429	289
45°	308	300	293	304	307	239
55°	195	190	189	196	196	176
65°	113	106	96	91	95	112
75°	50	42	26	21	21	54
85°	6	3	1	1	1	9
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°	626.3	626.3	626.3	626.3	626.3	626.3	626.3	626.3	626.3
2.5°	635.6	633.9	631.4	628.0	624.6	622.1	621.3	620.3	620.3
5°	649.1	645.8	640.7	633.9	629.7	627.2	624.6	623.0	623.0
7.5°	658.4	655.0	647.4	638.2	632.2	627.2	623.8	621.3	621.3
10°	662.6	658.4	649.1	637.3	628.0	621.3	616.1	614.4	614.4
12.5°	667.8	662.6	650.0	634.8	623.0	614.4	609.4	607.7	607.7
15°	672.9	667.0	650.8	633.1	617.8	607.7	603.4	602.6	602.6
17.5°	670.3	662.6	644.1	623.0	606.0	595.8	591.6	591.6	592.5
20°	656.7	649.1	628.0	604.3	586.6	579.0	575.5	577.3	579.0
22.5°	636.5	627.2	604.3	581.5	562.8	556.1	556.1	558.6	561.1
25°	611.0	602.6	580.6	555.2	537.5	532.3	534.0	538.3	541.7
27.5°	582.3	572.9	550.1	526.4	508.7	506.1	510.4	516.3	518.0
30°	543.4	535.8	516.3	493.5	478.2	477.3	483.2	487.5	491.8
32.5°	506.1	497.7	479.0	457.1	446.0	446.8	453.7	458.8	461.3
35°	463.0	455.4	441.8	424.0	413.9	415.6	423.2	428.3	429.1
37.5°	422.3	417.3	403.7	390.2	382.6	385.9	392.7	398.6	398.6
40°	381.7	377.5	367.4	356.3	352.1	356.3	363.0	368.2	368.2
42.5°	342.8	340.2	331.8	324.2	321.7	327.6	333.5	337.7	336.9
45°	308.1	305.5	299.6	293.7	292.9	298.8	303.8	306.4	307.2
47.5°	276.7	275.0	270.0	265.7	265.7	271.6	275.9	278.5	279.2
50°	248.0	246.3	242.1	238.7	239.6	245.5	248.8	251.4	252.2
52.5°	219.2	218.3	215.0	210.7	213.3	217.5	221.7	223.4	224.3
55°	194.7	194.7	190.4	187.0	188.7	192.9	195.6	196.4	196.4
57.5°	172.7	171.8	166.7	163.4	164.2	168.4	170.1	171.0	171.0
60°	151.4	150.7	145.5	140.5	140.5	143.0	143.8	144.7	144.7
62.5°	131.2	130.3	124.4	120.2	118.5	117.7	117.7	119.4	122.7
65°	112.6	111.8	105.7	99.0	96.5	93.9	91.4	93.1	94.8
67.5°	95.6	93.9	88.0	82.1	76.2	72.0	67.8	70.3	73.7
70°	79.6	77.9	71.1	64.4	57.5	50.8	47.4	50.8	52.5
72.5°	64.4	62.6	55.8	49.1	40.6	33.9	33.0	33.9	34.7
75°	49.9	49.1	42.3	34.7	26.3	21.1	21.1	21.1	21.1
77.5°	37.3	35.6	28.8	22.1	15.2	11.8	11.0	11.0	11.0
80°	25.4	23.6	17.7	12.7	6.8	5.1	5.1	4.2	4.2
82.5°	14.4	13.5	9.3	5.1	2.5	1.7	1.7	1.7	1.7
85°	5.9	5.1	3.4	1.7	0.8	0.8	0.8	0.8	0.8
87.5°	0.8	0.8	0.8	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



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)