

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: P579934

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579934  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC415D010-HM40525930-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1284.8 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

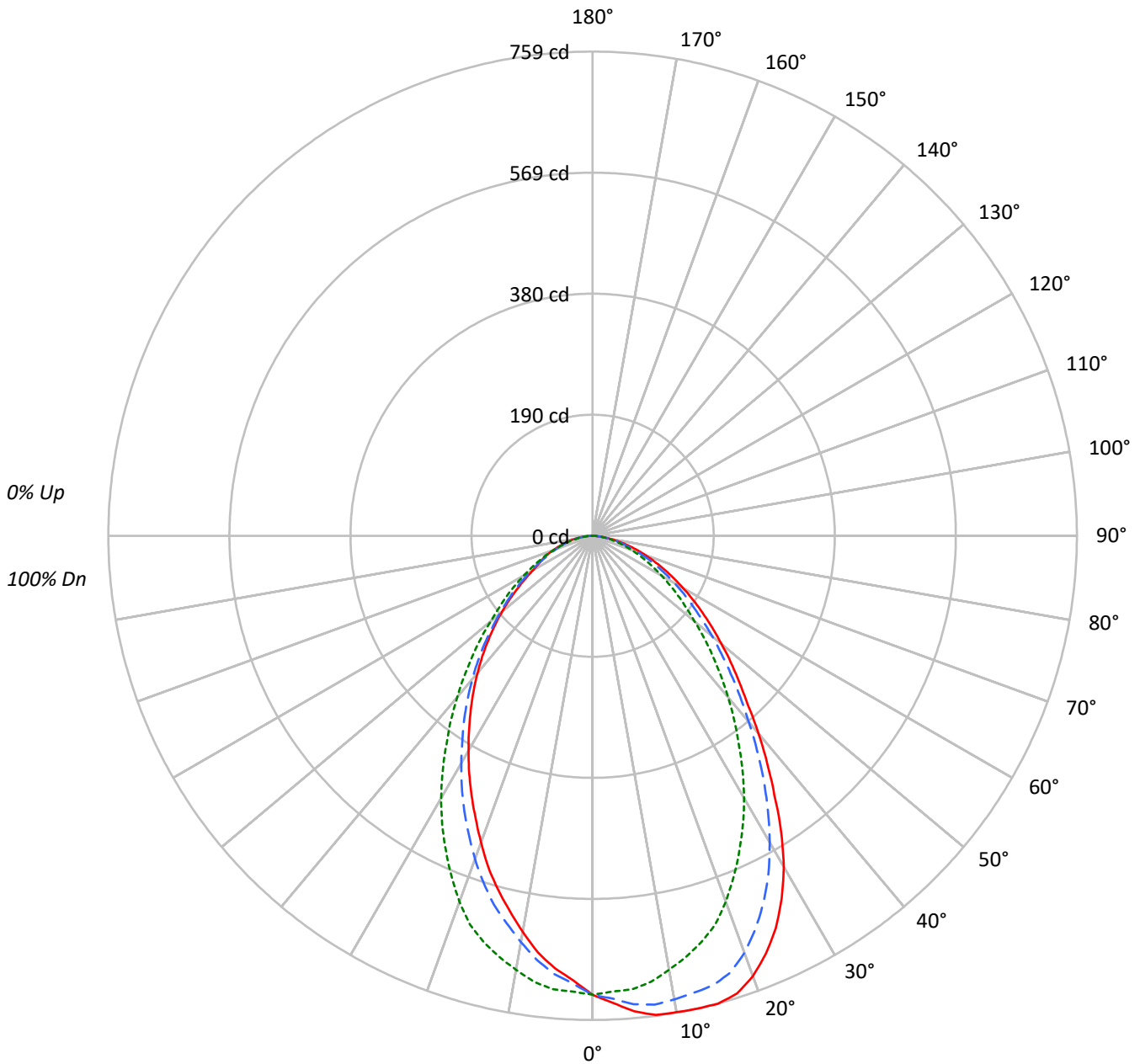
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66
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	69	61	56	67	60	55	65	59	54	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47			47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

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

	0°	90°	180°
0°	88747	88747	88747
5°	92652	88356	84257
10°	94988	86509	78982
15°	96960	84190	73272
20°	96438	80096	67101
25°	92383	74078	61067
30°	85357	67624	55333
35°	74822	60156	50097
40°	65131	53151	45117
45°	56709	46365	40295
50°	50506	39952	35558
55°	45138	35139	30752
60°	40309	30688	26495
65°	35811	26910	25188
70°	31448	23225	23514
75°	26593	19778	21779
80°	20457	16764	19889
85°	11888	13162	16700



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	5.2
10°-20°	186.0	14.5
20°-30°	254.2	19.8
30°-40°	255.2	19.9
40°-50°	211.1	16.4
50°-60°	153.0	11.9
60°-70°	96.9	7.5
70°-80°	49.0	3.8
80°-90°	12.0	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°	507.6	39.5
0°-40°	762.8	59.4
0°-60°	1126.9	87.7
0°-90°	1284.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1284.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	720	720	720	720	720	
5°	748	737	714	690	680	72
15°	759	730	659	598	574	214
25°	679	634	544	476	449	310
35°	497	467	400	350	333	311
45°	325	306	266	240	231	253
55°	210	191	163	149	143	189
65°	123	109	92	83	86	122
75°	56	48	42	43	46	60
85°	8	8	9	11	12	12
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°	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5
2.5°	733.0	730.4	726.2	721.2	715.2	708.5	702.6	699.1	697.4
5°	748.3	744.8	737.2	726.2	713.6	700.8	689.8	683.1	680.5
7.5°	757.6	752.5	741.4	724.5	705.1	686.4	670.4	661.1	658.6
10°	758.4	752.5	738.0	715.2	690.7	666.2	646.6	633.1	630.6
12.5°	759.3	751.7	733.8	706.8	676.3	645.8	622.2	606.0	601.8
15°	759.3	751.7	729.6	697.4	659.3	624.7	598.4	579.8	573.8
17.5°	752.5	744.1	717.8	680.5	639.0	600.1	569.6	550.2	544.3
20°	734.7	725.4	695.7	655.1	610.2	569.6	539.2	518.8	511.2
22.5°	709.3	698.3	667.0	623.0	578.1	536.7	507.0	485.8	479.1
25°	678.8	667.9	634.0	590.8	544.3	505.3	475.7	456.3	448.7
27.5°	641.6	629.8	596.7	553.6	510.4	471.5	444.3	426.6	419.0
30°	599.3	586.6	555.2	513.8	474.8	437.6	411.4	396.9	388.5
32.5°	550.2	539.2	511.2	474.0	437.6	402.0	380.1	367.4	360.5
35°	496.9	491.0	467.2	435.0	399.5	369.9	350.4	338.6	332.7
37.5°	449.5	443.5	423.2	396.1	364.9	337.7	321.7	311.5	306.4
40°	404.5	399.5	380.1	357.2	330.1	306.4	292.9	285.3	280.2
42.5°	360.5	358.0	342.0	320.7	297.1	276.7	265.8	259.8	255.6
45°	325.1	321.7	306.4	286.1	265.8	248.9	239.6	235.4	231.0
47.5°	293.7	289.5	273.4	255.6	237.0	221.7	213.3	209.1	207.4
50°	263.2	259.0	244.6	226.8	208.2	197.3	190.4	186.2	185.3
52.5°	236.2	231.9	215.8	198.9	184.5	175.2	169.3	165.1	163.4
55°	209.9	204.9	191.2	175.2	163.4	154.9	148.9	144.7	143.0
57.5°	186.2	181.1	169.3	154.1	143.0	135.4	130.3	126.1	124.4
60°	163.4	159.2	148.2	133.7	124.4	117.7	112.6	109.2	107.4
62.5°	142.2	138.8	127.8	115.1	107.4	101.5	97.3	93.9	95.6
65°	122.7	119.4	109.2	98.2	92.2	86.3	83.0	83.0	86.3
67.5°	104.1	100.7	92.2	83.0	77.9	73.7	71.1	73.7	76.2
70°	87.2	83.8	76.2	68.6	64.4	60.9	60.9	63.4	65.2
72.5°	71.1	67.8	61.7	55.8	52.5	49.9	52.5	54.1	55.8
75°	55.8	53.3	48.2	44.0	41.5	40.6	43.2	44.9	45.7
77.5°	41.5	39.8	36.4	33.0	31.3	32.2	34.7	35.6	36.4
80°	28.8	28.0	25.4	23.6	23.6	24.6	26.3	27.1	28.0
82.5°	17.7	17.7	16.0	15.2	16.0	17.7	18.6	19.4	19.4
85°	8.4	9.3	8.4	8.4	9.3	11.0	11.0	11.8	11.8
87.5°	2.5	2.5	3.4	3.4	4.2	4.2	4.2	4.2	5.1
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)