

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: P579862

Luminaire Tested: **HC415D010-HM40525830-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579862  
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-HM40525830-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1462.0 lumens  
Efficiency: N/A  
Efficacy: 104.4 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

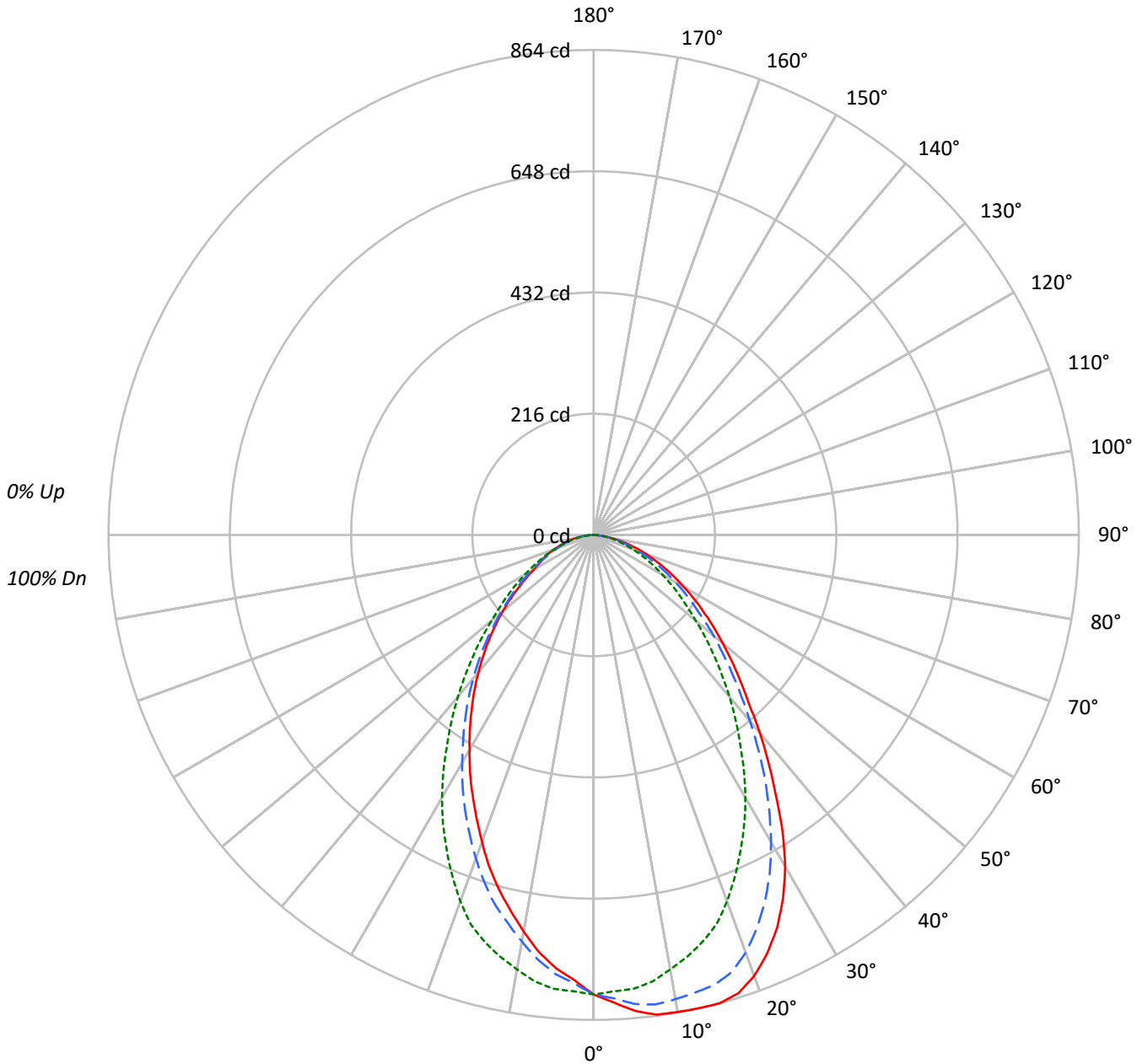
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P579862

CATALOG NUMBER: HC415D010-HM40525830-41WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P579862

CATALOG NUMBER: HC415D010-HM40525830-41WWW

**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°	100971	100971	100971
5°	105418	100527	95884
10°	108089	98433	89878
15°	110317	95811	83386
20°	109735	91161	76355
25°	105135	84285	69477
30°	97121	76953	62967
35°	85121	68452	56993
40°	74132	60494	51332
45°	64524	52750	45877
50°	57472	45478	40470
55°	51375	39977	35010
60°	45860	34931	30170
65°	40744	30616	28661
70°	35811	26399	26723
75°	30310	22494	24782
80°	23227	19108	22588
85°	13728	15001	19106



TEST NUMBER: P579862

CATALOG NUMBER: HC415D010-HM40525830-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.7	5.2
10°-20°	211.7	14.5
20°-30°	289.2	19.8
30°-40°	290.4	19.9
40°-50°	240.2	16.4
50°-60°	174.1	11.9
60°-70°	110.3	7.5
70°-80°	55.7	3.8
80°-90°	13.6	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°	577.6	39.5
0°-40°	868.0	59.4
0°-60°	1282.3	87.7
0°-90°	1462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1462.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	819	819	819	819	819	
5°	851	839	812	785	774	82
15°	864	830	750	681	653	243
25°	772	721	619	541	510	353
35°	565	532	455	399	378	354
45°	370	349	302	272	263	288
55°	239	218	186	170	163	215
65°	140	124	105	94	98	139
75°	64	55	47	49	52	68
85°	10	10	11	12	14	13
90°	0	0	0	0	0	



TEST NUMBER: P579862

CATALOG NUMBER: HC415D010-HM40525830-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6	818.6
2.5°	834.1	831.1	826.4	820.6	813.9	806.1	799.4	795.6	793.6
5°	851.4	847.5	838.9	826.4	811.9	797.5	785.0	777.3	774.4
7.5°	862.1	856.3	843.8	824.4	802.3	781.1	762.8	752.2	749.3
10°	863.0	856.3	839.9	813.9	785.9	758.0	735.9	720.4	717.6
12.5°	863.9	855.3	835.0	804.2	769.5	734.8	707.9	689.6	684.8
15°	863.9	855.3	830.2	793.6	750.3	710.9	680.9	659.8	653.0
17.5°	856.3	846.6	816.7	774.4	727.2	682.9	648.2	626.0	619.3
20°	836.0	825.5	791.7	745.5	694.5	648.2	613.5	590.4	581.7
22.5°	807.2	794.6	758.9	708.9	657.9	610.7	576.9	552.8	545.2
25°	772.5	760.0	721.4	672.3	619.3	575.0	541.3	519.2	510.5
27.5°	730.1	716.5	679.0	629.9	580.8	536.4	505.6	485.4	476.7
30°	681.9	667.4	631.8	584.6	540.3	498.0	468.1	451.7	442.1
32.5°	626.0	613.5	581.7	539.4	498.0	457.5	432.4	418.0	410.3
35°	565.3	558.6	531.7	495.0	454.6	420.9	398.7	385.2	378.5
37.5°	511.4	504.7	481.5	450.7	415.1	384.3	366.0	354.4	348.6
40°	460.4	454.6	432.4	406.5	375.7	348.6	333.3	324.6	318.8
42.5°	410.3	407.4	389.1	365.1	338.0	314.9	302.4	295.7	290.8
45°	369.9	366.0	348.6	325.5	302.4	283.1	272.5	267.8	263.0
47.5°	334.2	329.4	311.1	290.8	269.7	252.3	242.7	237.9	235.9
50°	299.5	294.7	278.3	258.1	237.0	224.4	216.7	211.9	210.9
52.5°	268.7	263.9	245.6	226.4	210.0	199.3	192.6	187.8	185.9
55°	238.9	233.1	217.6	199.3	185.9	176.2	169.5	164.8	162.8
57.5°	211.9	206.1	192.6	175.3	162.8	154.1	148.4	143.5	141.6
60°	185.9	181.1	168.5	152.1	141.6	133.8	128.1	124.3	122.3
62.5°	161.8	157.9	145.4	131.0	122.3	115.6	110.7	106.9	108.8
65°	139.6	135.8	124.3	111.8	104.9	98.2	94.4	94.4	98.2
67.5°	118.5	114.6	104.9	94.4	88.6	83.8	81.0	83.8	86.6
70°	99.3	95.4	86.6	78.0	73.2	69.4	69.4	72.2	74.1
72.5°	81.0	77.1	70.3	63.6	59.7	56.8	59.7	61.6	63.6
75°	63.6	60.7	54.9	50.0	47.2	46.3	49.1	51.1	52.0
77.5°	47.2	45.3	41.4	37.5	35.6	36.6	39.5	40.5	41.4
80°	32.7	31.8	28.9	26.9	26.9	28.0	29.9	30.8	31.8
82.5°	20.2	20.2	18.3	17.3	18.3	20.2	21.1	22.2	22.2
85°	9.7	10.6	9.7	9.7	10.6	12.5	12.5	13.5	13.5
87.5°	2.8	2.8	3.9	3.9	4.8	4.8	4.8	4.8	5.8
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)