

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: P579899

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579899  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC415D010-HM40525840-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

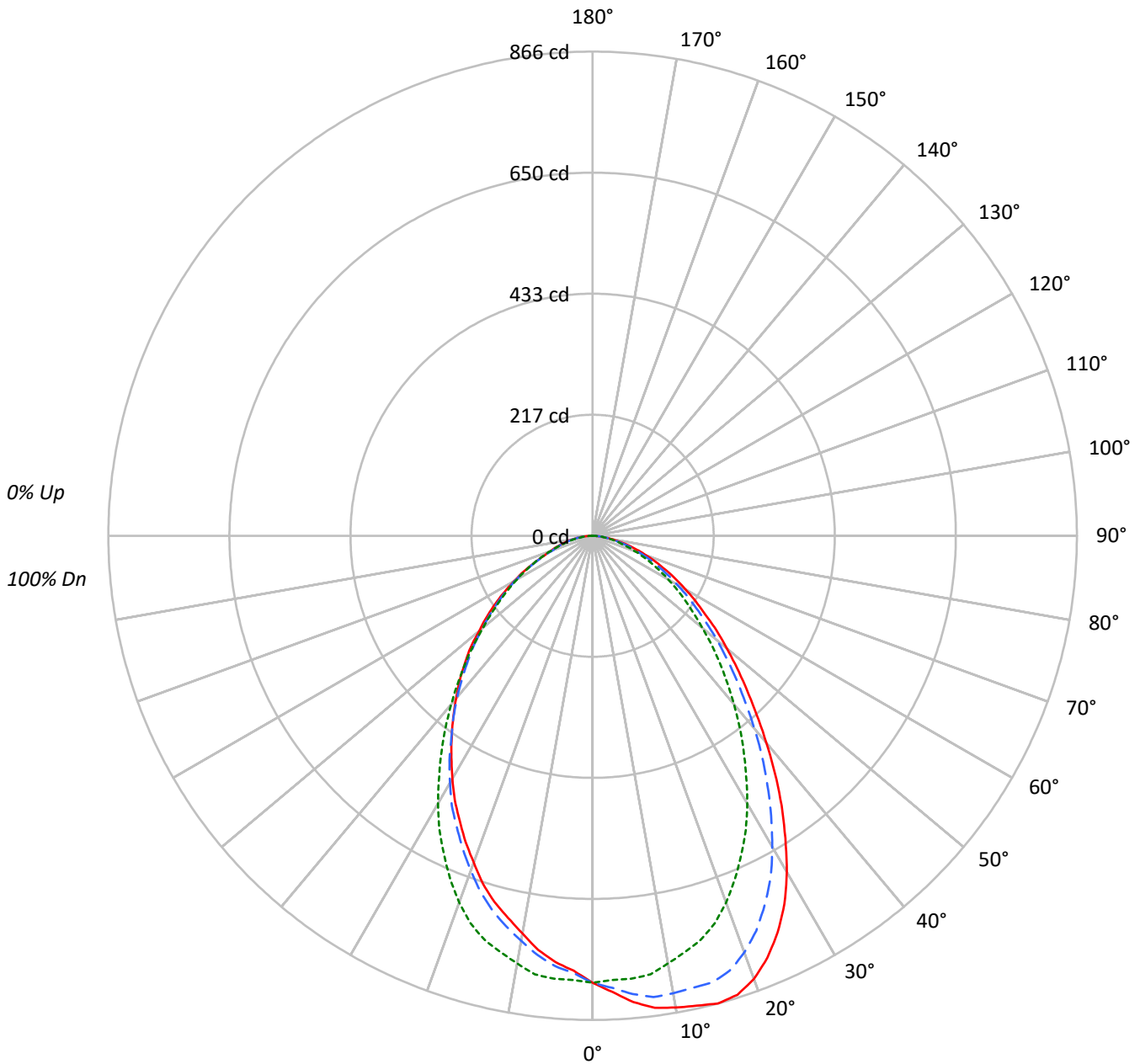
Lumens per Lamp: N/A  
Luminaire Lumens: 1550.1 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87																			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66																			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58																			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51																			
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46																			
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

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

	0°	90°	180°
0°	98590	98590	98590
5°	103672	98459	94769
10°	107300	97280	90467
15°	110573	95517	86604
20°	110706	91581	81619
25°	106537	85605	76514
30°	98930	78762	71470
35°	88690	70907	66118
40°	77803	63263	61122
45°	68013	56029	56378
50°	60043	49028	50794
55°	52966	43482	45676
60°	47340	38484	39989
65°	41911	33856	33856
70°	36605	28851	28851
75°	31311	24448	27355
80°	24790	21878	24790
85°	15992	18823	23210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	4.9
10°-20°	213.3	13.8
20°-30°	298.8	19.3
30°-40°	307.8	19.9
40°-50°	262.1	16.9
50°-60°	194.2	12.5
60°-70°	121.8	7.9
70°-80°	60.5	3.9
80°-90°	15.9	1.0
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°	587.8	37.9
0°-40°	895.6	57.8
0°-60°	1351.8	87.2
0°-90°	1550.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1550.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	799	799	799	799	799	
5°	837	823	795	773	765	80
15°	866	827	748	694	678	243
25°	783	728	629	574	562	358
35°	589	545	471	440	439	367
45°	390	363	321	315	323	303
55°	246	227	202	206	212	223
65°	144	129	116	114	116	143
75°	66	58	51	55	57	70
85°	11	11	13	15	16	15
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°	799.3	799.3	799.3	799.3	799.3	799.3	799.3	799.3	799.3
2.5°	816.7	813.6	809.5	802.4	795.2	789.1	782.8	779.8	778.7
5°	837.3	831.0	822.8	809.5	795.2	782.8	772.6	767.5	765.4
7.5°	851.6	845.5	832.2	811.6	791.1	772.6	756.2	749.1	747.0
10°	856.7	849.6	831.0	803.4	776.7	754.2	735.6	726.4	722.3
12.5°	860.8	851.6	828.0	795.2	762.4	734.6	715.2	702.8	699.7
15°	865.9	855.7	826.9	786.9	748.0	715.2	693.6	682.3	678.2
17.5°	860.8	849.6	815.7	770.5	726.4	690.5	667.0	656.6	652.5
20°	843.4	831.0	793.2	744.8	697.7	660.7	637.2	626.9	621.8
22.5°	816.7	803.4	764.4	713.1	664.9	629.0	606.4	596.1	593.1
25°	782.8	769.5	728.5	676.2	629.0	594.1	574.5	565.3	562.2
27.5°	742.8	729.5	689.5	638.2	593.1	560.2	544.9	535.6	533.6
30°	694.6	681.3	642.3	595.1	553.0	522.2	509.9	502.8	501.8
32.5°	641.3	630.0	594.1	551.0	511.0	485.3	476.1	470.9	469.9
35°	589.0	576.7	544.9	505.9	470.9	448.4	440.1	439.1	439.1
37.5°	535.6	523.2	497.7	461.7	431.9	411.5	408.4	409.4	409.4
40°	483.2	472.0	449.5	419.7	392.9	377.6	376.6	378.6	379.6
42.5°	434.0	424.8	404.2	378.6	356.0	343.7	344.7	348.8	351.9
45°	389.9	381.7	363.3	340.6	321.2	311.9	314.9	320.2	323.2
47.5°	349.9	342.7	325.3	304.7	288.3	282.2	286.3	292.4	296.5
50°	312.9	306.8	290.4	268.8	255.5	251.4	256.5	262.6	264.7
52.5°	280.2	273.9	256.5	238.1	227.7	225.7	230.8	236.0	239.1
55°	246.3	241.2	226.7	210.3	202.2	201.1	206.3	210.3	212.4
57.5°	218.5	213.4	200.1	185.7	178.5	177.5	182.6	185.7	186.7
60°	191.9	186.7	174.4	161.1	156.0	156.0	159.1	161.1	162.1
62.5°	167.3	162.1	150.9	139.5	135.4	135.4	135.4	136.4	139.5
65°	143.6	139.5	129.3	119.0	116.0	113.9	113.9	113.9	116.0
67.5°	122.1	118.0	109.8	100.5	97.4	94.4	93.3	95.4	95.4
70°	101.5	98.5	90.3	83.1	80.0	77.0	76.0	80.0	80.0
72.5°	83.1	80.0	74.9	67.8	64.7	63.6	65.7	67.8	68.8
75°	65.7	62.5	58.4	54.3	51.3	52.3	55.4	56.4	57.4
77.5°	49.2	48.2	44.1	41.0	41.0	42.1	44.1	46.2	47.2
80°	34.9	33.9	31.8	29.8	30.8	32.9	33.9	35.9	34.9
82.5°	21.6	21.6	20.5	20.5	21.6	23.6	24.7	25.7	26.7
85°	11.3	11.3	11.3	12.3	13.3	14.3	15.3	16.4	16.4
87.5°	3.1	4.1	4.1	5.1	6.1	6.1	7.2	7.2	7.2
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)