

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: P579880

Luminaire Tested: **HC415D010-HM40525835-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579880  
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-HM40525835-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1515.4 lumens  
Efficiency: N/A  
Efficacy: 108.2 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

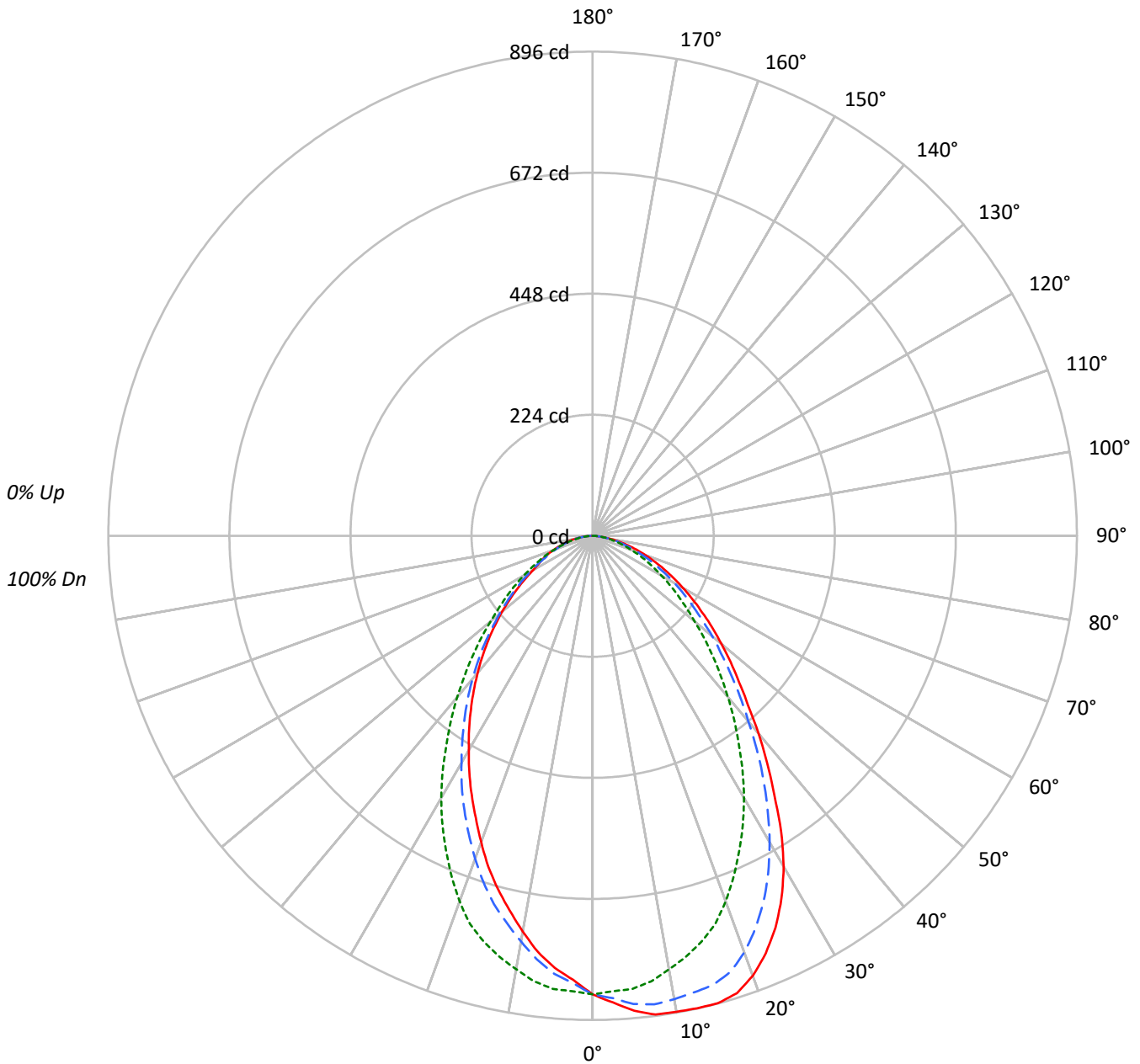
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	104659	104659	104659
5°	109268	104204	99388
10°	112035	102040	93147
15°	114352	99310	86438
20°	113738	94482	79151
25°	108973	87374	72022
30°	100682	79774	65260
35°	88238	70952	59086
40°	76837	62684	53200
45°	66879	54686	47534
50°	59582	47129	41948
55°	53246	41439	36278
60°	47537	36214	31280
65°	42232	31754	29741
70°	37074	27336	27733
75°	31406	23304	25687
80°	24151	19889	23441
85°	14152	15568	19813



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.5	5.2
10°-20°	219.4	14.5
20°-30°	299.8	19.8
30°-40°	301.0	19.9
40°-50°	249.0	16.4
50°-60°	180.5	11.9
60°-70°	114.3	7.5
70°-80°	57.8	3.8
80°-90°	14.2	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°	598.7	39.5
0°-40°	899.7	59.4
0°-60°	1329.2	87.7
0°-90°	1515.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1515.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	848	848	848	848	848	
5°	882	870	842	814	803	85
15°	896	861	778	706	677	252
25°	801	748	642	561	529	366
35°	586	551	471	413	392	367
45°	383	362	314	282	272	298
55°	248	226	193	176	169	223
65°	145	129	109	98	102	144
75°	66	57	49	51	54	70
85°	10	10	11	13	14	14
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°	848.5	848.5	848.5	848.5	848.5	848.5	848.5	848.5	848.5
2.5°	864.6	861.6	856.6	850.6	843.7	835.6	828.6	824.7	822.6
5°	882.5	878.6	869.6	856.6	841.6	826.6	813.6	805.7	802.7
7.5°	893.6	887.5	874.6	854.6	831.6	809.7	790.7	779.8	776.7
10°	894.5	887.5	870.6	843.7	814.7	785.7	762.7	746.8	743.7
12.5°	895.5	886.5	865.6	833.6	797.7	761.8	733.8	714.8	709.8
15°	895.5	886.5	860.6	822.6	777.7	736.8	705.8	683.9	676.9
17.5°	887.5	877.5	846.6	802.7	753.7	707.8	671.9	648.9	642.0
20°	866.5	855.6	820.7	772.7	719.8	671.9	635.9	611.9	603.0
22.5°	836.6	823.6	786.7	734.7	681.9	633.0	598.1	573.0	565.1
25°	800.7	787.7	747.8	696.9	642.0	596.0	561.1	538.1	529.2
27.5°	756.8	742.8	703.8	652.9	602.0	556.1	524.2	503.1	494.1
30°	706.9	691.9	654.9	606.0	560.1	516.2	485.2	468.2	458.2
32.5°	648.9	635.9	603.0	559.1	516.2	474.2	448.2	433.3	425.4
35°	586.0	579.1	551.1	513.1	471.2	436.3	413.3	399.3	392.4
37.5°	530.1	523.1	499.1	467.2	430.2	398.3	379.4	367.4	361.5
40°	477.2	471.2	448.2	421.3	389.3	361.5	345.4	336.4	330.4
42.5°	425.4	422.3	403.3	378.4	350.4	326.4	313.5	306.5	301.5
45°	383.4	379.4	361.5	337.5	313.5	293.5	282.5	277.5	272.5
47.5°	346.4	341.4	322.5	301.5	279.6	261.5	251.6	246.6	244.6
50°	310.5	305.5	288.6	267.5	245.6	232.6	224.7	219.7	218.6
52.5°	278.6	273.6	254.6	234.6	217.6	206.7	199.7	194.7	192.7
55°	247.6	241.6	225.6	206.7	192.7	182.7	175.7	170.7	168.7
57.5°	219.7	213.6	199.7	181.7	168.7	159.7	153.7	148.7	146.8
60°	192.7	187.7	174.8	157.7	146.8	138.7	132.8	128.8	126.8
62.5°	167.7	163.7	150.8	135.8	126.8	119.8	114.8	110.9	112.8
65°	144.7	140.8	128.8	115.9	108.8	101.9	97.8	97.8	101.9
67.5°	122.8	118.8	108.8	97.8	91.9	86.9	83.9	86.9	89.8
70°	102.8	98.8	89.8	80.8	75.8	71.9	71.9	74.9	76.9
72.5°	83.9	79.8	72.9	65.9	61.9	58.9	61.9	63.9	65.9
75°	65.9	62.9	56.8	52.0	48.9	47.9	50.9	52.9	53.9
77.5°	48.9	47.0	43.0	38.9	37.0	38.0	40.9	42.0	43.0
80°	34.0	33.0	29.9	28.0	28.0	29.0	30.9	31.9	33.0
82.5°	20.9	20.9	19.0	18.0	19.0	20.9	21.9	23.0	23.0
85°	10.0	11.0	10.0	10.0	11.0	13.0	13.0	14.0	14.0
87.5°	3.0	3.0	4.0	4.0	5.0	5.0	5.0	5.0	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)