

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: P579916

Luminaire Tested: **HC415D010-HM40525927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579916
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-HM40525927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1154.8 lumens
Efficiency: N/A
Efficacy: 82.5 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

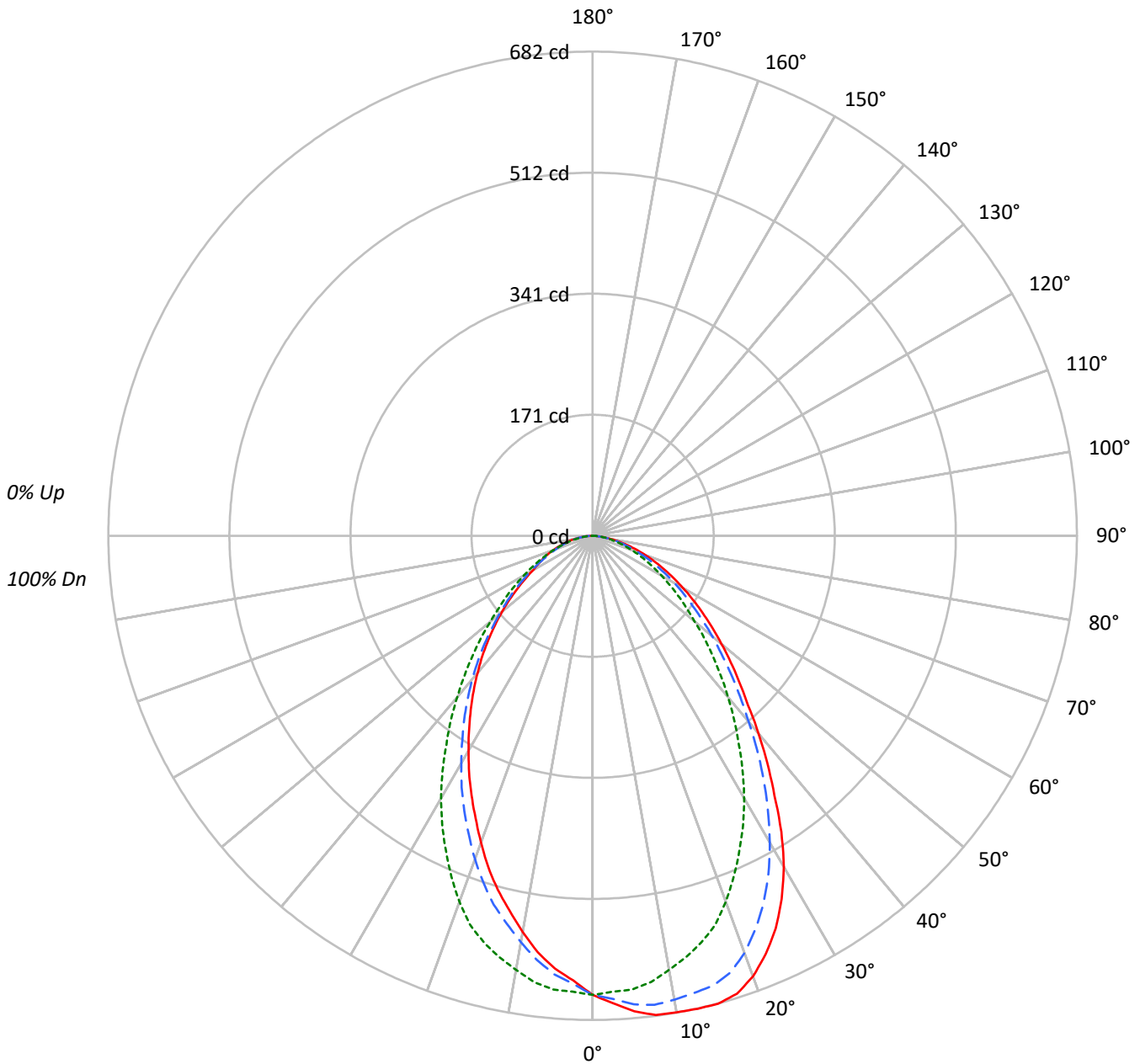
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	79755	79755	79755
5°	83267	79416	75739
10°	85369	77754	70991
15°	87140	75673	65879
20°	86685	71997	60315
25°	83033	66565	54874
30°	76711	60788	49736
35°	67248	54072	45023
40°	58546	47790	40544
45°	50953	41673	36231
50°	45402	35922	31969
55°	40558	31569	27655
60°	36214	27605	23830
65°	32192	24195	22619
70°	28238	20881	21133
75°	23972	17776	19539
80°	18326	15130	17829
85°	10756	11888	15143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	5.2
10°-20°	167.2	14.5
20°-30°	228.4	19.8
30°-40°	229.4	19.9
40°-50°	189.8	16.4
50°-60°	137.5	11.9
60°-70°	87.1	7.5
70°-80°	44.0	3.8
80°-90°	10.8	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°	456.2	39.5
0°-40°	685.6	59.4
0°-60°	1012.9	87.7
0°-90°	1154.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	647	647	647	647	647	
5°	672	663	641	620	612	64
15°	682	656	593	538	516	192
25°	610	570	489	428	403	279
35°	447	420	359	315	299	280
45°	292	275	239	215	208	227
55°	189	172	147	134	129	170
65°	110	98	83	75	78	110
75°	50	43	37	39	41	54
85°	8	8	8	10	11	11
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°	646.6	646.6	646.6	646.6	646.6	646.6	646.6	646.6	646.6
2.5°	658.9	656.5	652.8	648.2	642.9	636.7	631.5	628.4	626.9
5°	672.5	669.5	662.6	652.8	641.4	629.9	620.0	614.0	611.7
7.5°	680.9	676.3	666.4	651.3	633.8	617.0	602.5	594.2	591.9
10°	681.6	676.3	663.4	642.9	620.8	598.7	581.2	569.1	566.8
12.5°	682.4	675.6	659.6	635.2	607.8	580.4	559.2	544.7	540.9
15°	682.4	675.6	655.8	626.9	592.6	561.5	537.9	521.1	515.9
17.5°	676.3	668.8	645.1	611.7	574.4	539.4	512.0	494.5	489.1
20°	660.4	652.0	625.4	588.9	548.5	512.0	484.6	466.4	459.5
22.5°	637.5	627.6	599.5	560.0	519.6	482.3	455.7	436.7	430.6
25°	610.1	600.2	569.9	531.0	489.1	454.2	427.5	410.1	403.2
27.5°	576.7	566.0	536.3	497.6	458.8	423.8	399.4	383.4	376.6
30°	538.6	527.2	499.0	461.8	426.8	393.3	369.8	356.8	349.2
32.5°	494.5	484.6	459.5	426.0	393.3	361.3	341.6	330.2	324.0
35°	446.6	441.3	420.0	391.0	359.1	332.5	314.9	304.3	299.0
37.5°	404.0	398.6	380.4	356.0	327.9	303.6	289.1	279.9	275.4
40°	363.6	359.1	341.6	321.1	296.8	275.4	263.2	256.4	251.8
42.5°	324.0	321.8	307.3	288.3	267.1	248.8	238.9	233.5	229.8
45°	292.1	289.1	275.4	257.2	238.9	223.6	215.3	211.5	207.7
47.5°	264.0	260.1	245.7	229.8	213.1	199.3	191.7	187.9	186.4
50°	236.6	232.7	219.9	203.9	187.2	177.3	171.2	167.4	166.6
52.5°	212.3	208.4	194.0	178.7	165.9	157.5	152.1	148.4	146.8
55°	188.6	184.1	171.9	157.5	146.8	139.2	133.9	130.1	128.6
57.5°	167.4	162.8	152.1	138.5	128.6	121.8	117.1	113.4	111.9
60°	146.8	143.0	133.1	120.2	111.9	105.7	101.2	98.1	96.6
62.5°	127.8	124.7	114.8	103.5	96.6	91.3	87.4	84.5	86.0
65°	110.3	107.2	98.1	88.2	82.9	77.5	74.6	74.6	77.5
67.5°	93.6	90.5	82.9	74.6	70.0	66.2	63.9	66.2	68.4
70°	78.3	75.3	68.4	61.6	57.9	54.8	54.8	57.1	58.6
72.5°	63.9	60.8	55.5	50.3	47.2	44.9	47.2	48.7	50.3
75°	50.3	48.0	43.3	39.6	37.3	36.5	38.8	40.4	41.0
77.5°	37.3	35.7	32.7	29.7	28.2	28.9	31.2	31.9	32.7
80°	25.8	25.1	22.9	21.3	21.3	22.1	23.5	24.3	25.1
82.5°	16.0	16.0	14.4	13.6	14.4	16.0	16.7	17.5	17.5
85°	7.6	8.4	7.6	7.6	8.4	9.9	9.9	10.7	10.7
87.5°	2.3	2.3	3.1	3.1	3.8	3.8	3.8	3.8	4.5
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)