

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: P579824

Luminaire Tested: **HC410D010-HM40525940-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579824
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC410D010-HM40525940-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1042.3 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

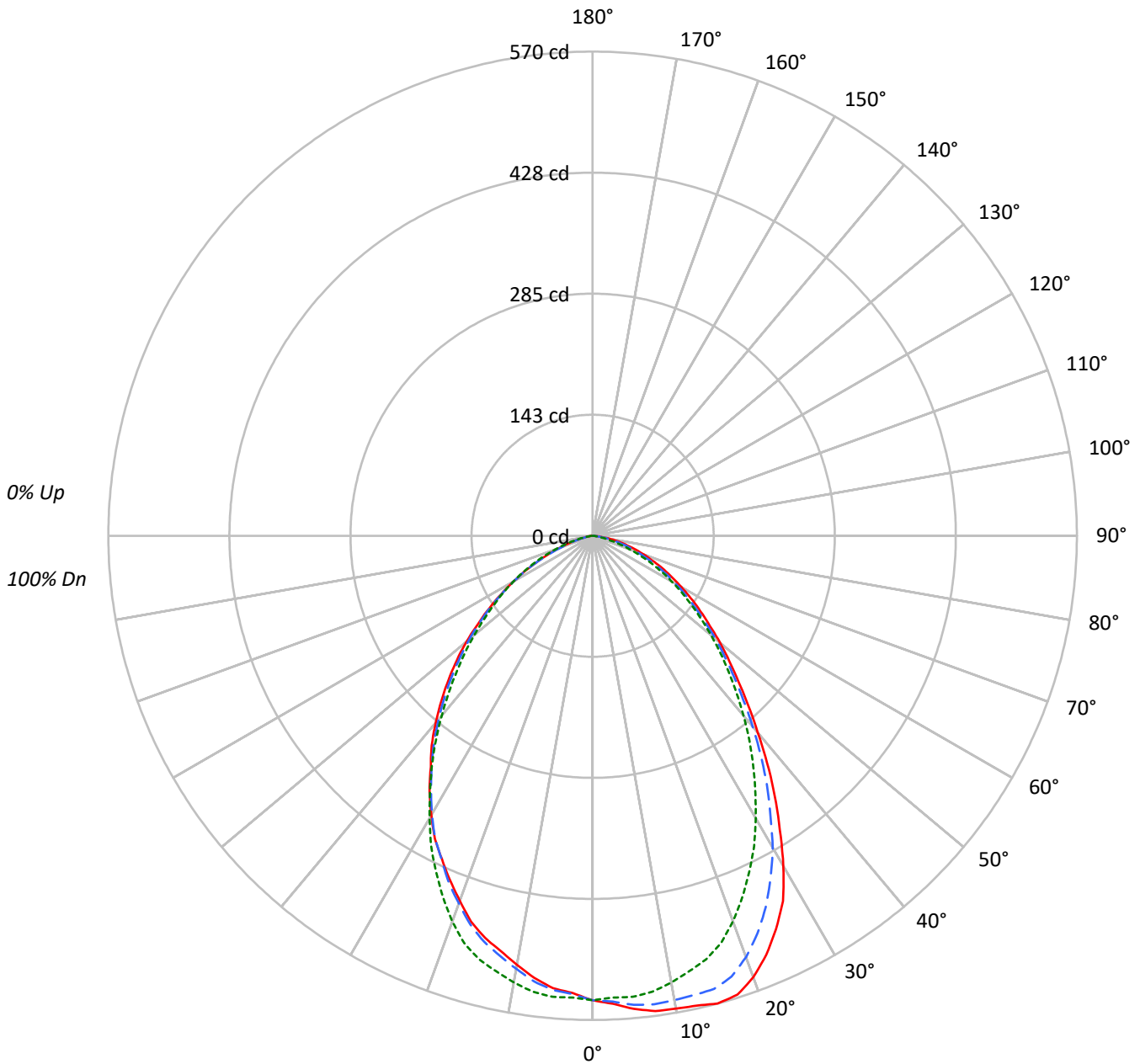
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47			47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	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	41	37	47	41	37	46	41	37	35			35
10	58	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°	67445	67445	67445
5°	69226	67455	66192
10°	70778	66870	64240
15°	72774	65930	62546
20°	72588	63399	60000
25°	69518	59352	57133
30°	63964	54664	54094
35°	56256	49615	50022
40°	48675	44424	46260
45°	42301	39458	41830
50°	37534	34809	37150
55°	33311	30537	31848
60°	29677	26470	26470
65°	26384	22006	20635
70°	22792	16661	14678
75°	19110	11009	9055
80°	14491	5327	4830
85°	7784	1981	1981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	5.0
10°-20°	146.8	14.1
20°-30°	207.0	19.9
30°-40°	213.9	20.5
40°-50°	181.3	17.4
50°-60°	131.9	12.7
60°-70°	77.1	7.4
70°-80°	28.6	2.7
80°-90°	3.8	0.4
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°	405.7	38.9
0°-40°	619.5	59.4
0°-60°	932.8	89.5
0°-90°	1042.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1042.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	547	547	547	547	547	
5°	559	554	545	537	535	54
15°	570	552	516	495	490	160
25°	511	482	436	420	420	234
35°	374	357	330	330	332	233
45°	242	236	226	234	240	189
55°	155	147	142	147	148	139
65°	90	83	75	71	71	90
75°	40	33	23	18	19	43
85°	6	3	1	1	1	8
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°	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8
2.5°	551.6	550.2	548.9	546.8	544.1	542.0	540.1	538.7	538.7
5°	559.1	557.1	554.3	549.5	544.8	540.8	536.7	534.6	534.6
7.5°	564.4	561.8	556.4	549.5	541.3	535.3	529.2	526.4	525.1
10°	565.1	562.5	555.0	544.8	533.9	524.4	517.7	513.6	512.9
12.5°	566.5	563.2	553.6	539.4	525.1	513.6	506.1	502.0	500.6
15°	569.9	565.1	552.3	533.9	516.3	502.7	494.6	491.2	489.8
17.5°	566.5	559.8	544.1	522.3	502.7	487.7	479.6	476.1	476.1
20°	553.0	546.1	527.8	504.0	483.0	468.7	460.5	458.5	457.1
22.5°	533.9	526.4	506.8	481.6	460.5	447.7	442.2	439.5	438.8
25°	510.8	503.3	482.3	456.5	436.1	425.3	420.5	420.5	419.8
27.5°	485.0	475.5	453.7	431.3	411.6	403.5	401.5	401.5	402.2
30°	449.1	442.2	423.9	402.2	383.8	378.4	378.4	379.8	379.8
32.5°	410.2	405.6	389.2	370.2	356.0	352.6	353.9	356.6	357.3
35°	373.6	368.1	357.3	340.4	329.5	328.1	330.1	332.2	332.2
37.5°	337.6	332.2	324.7	311.1	302.9	303.6	306.3	309.1	311.1
40°	302.3	298.2	292.8	281.9	275.9	278.5	281.9	284.6	287.3
42.5°	271.1	267.0	262.9	254.7	250.7	254.0	258.1	260.8	263.6
45°	242.5	239.8	235.7	229.0	226.2	229.6	234.3	237.0	239.8
47.5°	218.0	216.7	211.2	205.2	203.8	207.2	211.2	214.6	216.7
50°	195.6	193.6	188.8	182.8	181.4	186.9	189.5	191.5	193.6
52.5°	173.9	171.8	166.4	161.0	161.0	165.1	167.1	167.7	169.8
55°	154.9	152.8	147.4	143.4	142.0	145.3	146.7	146.7	148.1
57.5°	137.2	135.2	129.7	125.0	124.3	126.3	126.3	126.3	127.0
60°	120.3	118.2	112.8	108.7	107.3	108.0	107.3	106.6	107.3
62.5°	104.6	102.5	97.2	92.4	91.0	91.0	89.0	88.3	89.0
65°	90.4	86.9	82.8	78.1	75.4	73.4	70.7	70.7	70.7
67.5°	76.1	73.4	68.6	63.8	60.4	57.0	53.0	54.4	55.1
70°	63.2	61.1	55.6	51.0	46.2	42.1	38.7	40.1	40.7
72.5°	51.7	48.9	44.2	38.7	34.6	29.2	27.2	28.6	28.6
75°	40.1	37.3	33.2	27.9	23.1	18.3	18.3	19.0	19.0
77.5°	29.9	27.2	23.1	18.3	14.2	10.9	11.5	11.5	11.5
80°	20.4	18.3	14.9	10.9	7.5	6.1	6.1	6.1	6.8
82.5°	11.5	10.2	8.2	5.5	3.4	3.4	3.4	3.4	3.4
85°	5.5	4.1	3.4	2.0	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)