

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: P579719

Luminaire Tested: **HC410D010-HM40525830-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579719
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: HC410D010-HM40525830-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1070.3 lumens
Efficiency: N/A
Efficacy: 108.1 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

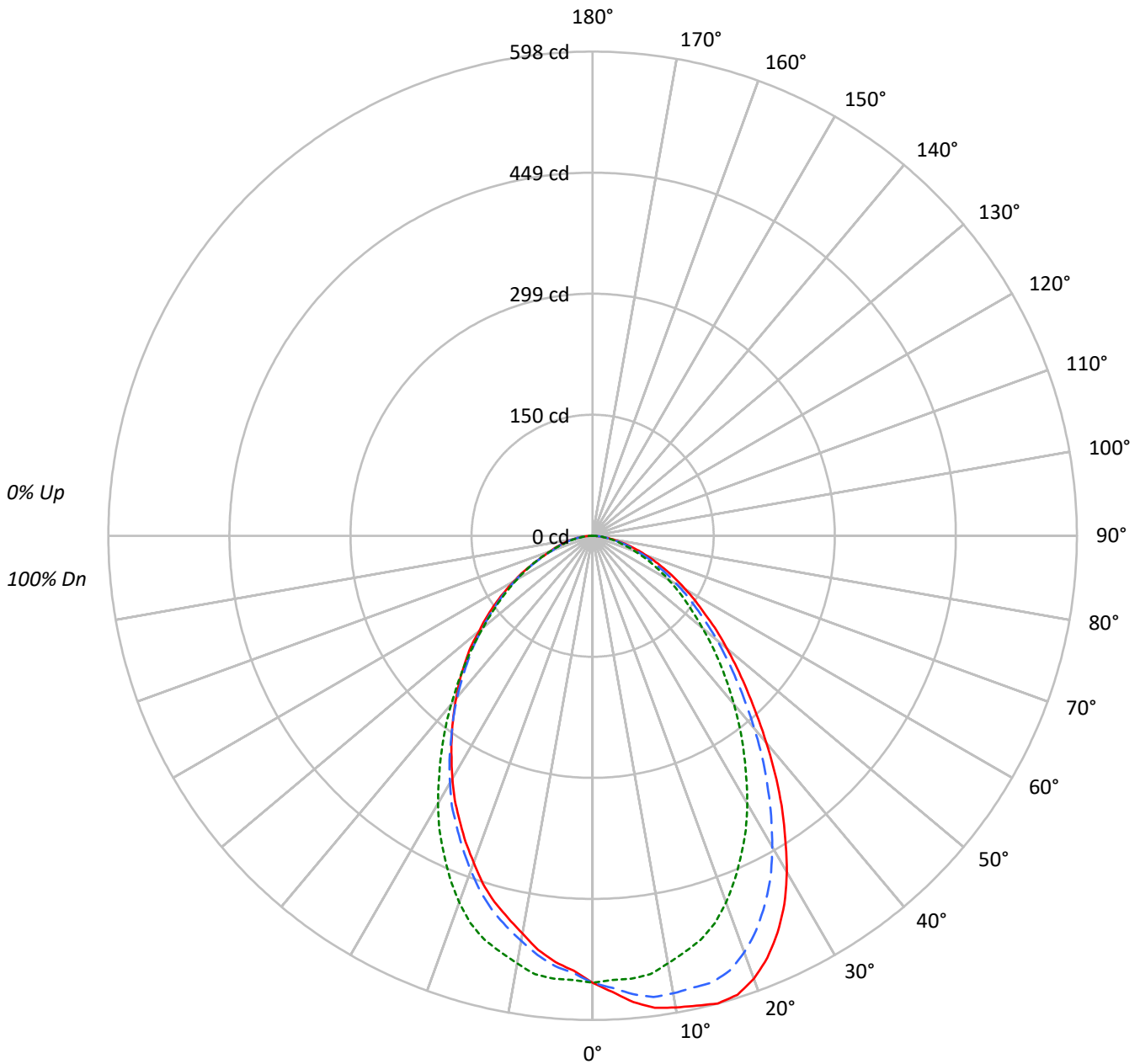
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	68074	68074	68074
5°	71578	67988	65437
10°	74084	67171	62474
15°	76350	65943	59800
20°	76434	63229	56364
25°	73574	59107	52846
30°	68322	54393	49337
35°	61240	48968	45670
40°	53731	43684	42202
45°	46976	38690	38934
50°	41468	33850	35078
55°	36558	29999	31547
60°	32687	26569	27629
65°	28953	23349	23349
70°	25281	19943	19943
75°	21589	16871	18920
80°	17119	15130	17119
85°	10897	13020	16134



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	4.9
10°-20°	147.3	13.8
20°-30°	206.3	19.3
30°-40°	212.5	19.9
40°-50°	180.9	16.9
50°-60°	134.1	12.5
60°-70°	84.1	7.9
70°-80°	41.8	3.9
80°-90°	11.0	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°	405.8	37.9
0°-40°	618.4	57.8
0°-60°	933.4	87.2
0°-90°	1070.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1070.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	552	552	552	552	552	
5°	578	568	549	534	528	56
15°	598	571	516	479	468	168
25°	541	503	434	397	388	247
35°	407	376	325	304	303	254
45°	269	251	222	218	223	209
55°	170	157	140	142	147	154
65°	99	89	80	79	80	99
75°	45	40	35	38	40	48
85°	8	8	9	11	11	10
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°	551.9	551.9	551.9	551.9	551.9	551.9	551.9	551.9	551.9
2.5°	564.0	561.8	559.0	554.0	549.1	544.8	540.6	538.4	537.7
5°	578.1	573.9	568.2	559.0	549.1	540.6	533.5	530.0	528.5
7.5°	588.0	583.8	574.6	560.4	546.2	533.5	522.1	517.2	515.7
10°	591.5	586.6	573.9	554.8	536.3	520.7	508.0	501.6	498.8
12.5°	594.4	588.0	571.7	549.1	526.4	507.3	493.8	485.4	483.2
15°	597.9	590.8	571.0	543.4	516.4	493.8	479.0	471.1	468.3
17.5°	594.4	586.6	563.2	532.0	501.6	476.8	460.5	453.4	450.5
20°	582.3	573.9	547.6	514.4	481.7	456.2	440.0	432.9	429.4
22.5°	564.0	554.8	527.8	492.4	459.1	434.3	418.7	411.6	409.5
25°	540.6	531.3	503.0	466.9	434.3	410.2	396.7	390.3	388.3
27.5°	512.9	503.7	476.1	440.6	409.5	386.8	376.2	369.8	368.4
30°	479.7	470.4	443.5	410.9	381.9	360.6	352.1	347.2	346.4
32.5°	442.8	435.1	410.2	380.4	352.8	335.1	328.8	325.2	324.4
35°	406.7	398.2	376.2	349.3	325.2	309.6	304.0	303.3	303.3
37.5°	369.8	361.3	343.6	318.9	298.3	284.0	282.0	282.7	282.7
40°	333.7	325.9	310.3	289.7	271.3	260.7	260.0	261.4	262.1
42.5°	299.6	293.3	279.2	261.4	245.8	237.4	238.1	240.9	243.0
45°	269.3	263.6	250.8	235.2	221.8	215.4	217.5	221.0	223.2
47.5°	241.6	236.6	224.6	210.4	199.0	194.8	197.7	201.9	204.7
50°	216.1	211.8	200.5	185.6	176.4	173.5	177.1	181.4	182.8
52.5°	193.5	189.1	177.1	164.3	157.3	155.9	159.4	163.0	165.1
55°	170.0	166.5	156.6	145.2	139.5	138.8	142.4	145.2	146.7
57.5°	150.9	147.4	138.2	128.3	123.2	122.6	126.1	128.3	128.9
60°	132.5	128.9	120.4	111.2	107.7	107.7	109.8	111.2	112.0
62.5°	115.5	112.0	104.1	96.4	93.5	93.5	93.5	94.2	96.4
65°	99.2	96.4	89.2	82.2	80.0	78.6	78.6	78.6	80.0
67.5°	84.3	81.5	75.8	69.4	67.3	65.2	64.5	65.9	65.9
70°	70.1	68.1	62.4	57.4	55.3	53.1	52.5	55.3	55.3
72.5°	57.4	55.3	51.7	46.8	44.6	43.9	45.3	46.8	47.5
75°	45.3	43.2	40.4	37.6	35.4	36.2	38.2	38.9	39.7
77.5°	34.0	33.3	30.5	28.3	28.3	29.0	30.5	31.9	32.5
80°	24.1	23.3	22.0	20.6	21.3	22.6	23.3	24.8	24.1
82.5°	14.9	14.9	14.2	14.2	14.9	16.3	17.0	17.8	18.4
85°	7.7	7.7	7.7	8.5	9.2	9.9	10.6	11.4	11.4
87.5°	2.2	2.8	2.8	3.5	4.2	4.2	5.0	5.0	5.0
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)