

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: P579737

Luminaire Tested: **HC410D010-HM40525835-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579737
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-HM40525835-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1109.4 lumens
Efficiency: N/A
Efficacy: 112.1 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

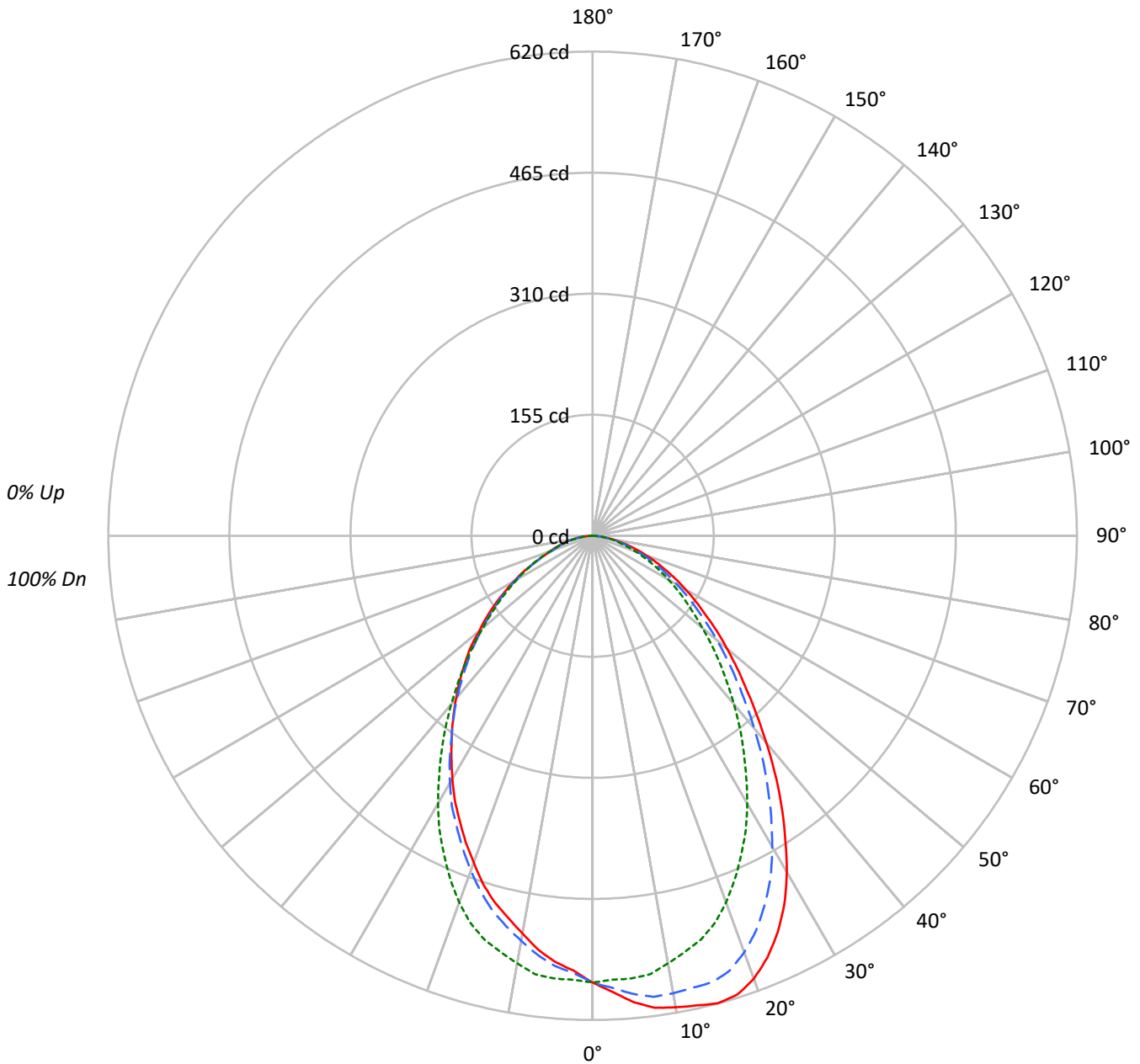
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: HC410D010-HM40525835-41WWWB

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
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°	70566	70566	70566
5°	74203	70464	67827
10°	76802	69626	64753
15°	79146	68356	61997
20°	79230	65552	58425
25°	76269	61271	54765
30°	70815	56373	51160
35°	63468	50760	47326
40°	55679	45294	43764
45°	48668	40103	40365
50°	42984	35097	36363
55°	37913	31096	32687
60°	33895	27531	28641
65°	30003	24224	24224
70°	26218	20629	20629
75°	22399	17538	19587
80°	17687	15698	17687
85°	11463	13586	16558



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	4.9
10°-20°	152.6	13.8
20°-30°	213.8	19.3
30°-40°	220.3	19.9
40°-50°	187.6	16.9
50°-60°	139.0	12.5
60°-70°	87.2	7.9
70°-80°	43.3	3.9
80°-90°	11.4	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°	420.7	37.9
0°-40°	641.0	57.8
0°-60°	967.5	87.2
0°-90°	1109.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1109.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	572	572	572	572	572	
5°	599	589	569	553	548	58
15°	620	592	535	496	486	174
25°	560	521	450	411	402	256
35°	422	390	337	315	314	263
45°	279	260	230	225	231	217
55°	176	162	145	148	152	159
65°	103	92	83	82	83	103
75°	47	42	37	40	41	50
85°	8	8	10	11	12	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°	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1
2.5°	584.6	582.3	579.5	574.2	569.1	564.7	560.4	558.1	557.4
5°	599.3	594.8	588.9	579.5	569.1	560.4	553.0	549.3	547.8
7.5°	609.5	605.1	595.5	580.8	566.2	553.0	541.2	536.1	534.6
10°	613.2	608.0	594.8	575.0	555.9	539.8	526.6	520.0	517.0
12.5°	616.1	609.5	592.7	569.1	545.7	525.8	511.9	503.0	500.8
15°	619.8	612.5	591.9	563.3	535.3	511.9	496.4	488.3	485.5
17.5°	616.1	608.0	583.8	551.5	520.0	494.2	477.4	470.0	467.0
20°	603.6	594.8	567.6	533.2	499.4	473.0	456.0	448.7	445.1
22.5°	584.6	575.0	547.2	510.4	475.9	450.2	434.0	426.6	424.5
25°	560.4	550.8	521.4	484.0	450.2	425.2	411.3	404.7	402.4
27.5°	531.7	522.1	493.4	456.8	424.5	400.9	390.0	383.4	381.9
30°	497.2	487.6	459.8	426.0	395.8	373.8	365.0	359.8	359.2
32.5°	459.0	450.9	425.2	394.3	365.8	347.3	340.7	337.1	336.4
35°	421.5	412.8	390.0	362.0	337.1	320.9	315.0	314.3	314.3
37.5°	383.4	374.5	356.2	330.5	309.2	294.5	292.2	293.0	293.0
40°	345.8	337.8	321.6	300.3	281.3	270.3	269.5	271.0	271.8
42.5°	310.7	304.1	289.4	271.0	254.8	246.0	246.7	249.7	251.8
45°	279.0	273.2	259.9	243.8	229.9	223.3	225.4	229.1	231.4
47.5°	250.5	245.2	232.8	218.2	206.3	202.0	204.8	209.3	212.2
50°	224.0	219.5	207.8	192.4	182.9	179.9	183.6	188.0	189.5
52.5°	200.5	196.1	183.6	170.4	163.1	161.6	165.2	168.9	171.2
55°	176.3	172.5	162.3	150.6	144.6	144.0	147.6	150.6	152.0
57.5°	156.5	152.7	143.2	132.9	127.8	127.0	130.8	132.9	133.6
60°	137.4	133.6	124.8	115.3	111.6	111.6	113.8	115.3	116.1
62.5°	119.7	116.1	108.0	99.9	97.0	97.0	97.0	97.6	99.9
65°	102.8	99.9	92.5	85.2	83.0	81.5	81.5	81.5	83.0
67.5°	87.4	84.4	78.5	71.9	69.8	67.6	66.8	68.3	68.3
70°	72.7	70.4	64.6	59.5	57.2	55.1	54.4	57.2	57.2
72.5°	59.5	57.2	53.6	48.5	46.3	45.5	47.0	48.5	49.2
75°	47.0	44.8	41.9	38.9	36.8	37.4	39.6	40.4	41.1
77.5°	35.3	34.5	31.5	29.4	29.4	30.2	31.5	33.0	33.8
80°	24.9	24.2	22.8	21.3	22.1	23.4	24.2	25.7	24.9
82.5°	15.5	15.5	14.7	14.7	15.5	16.8	17.6	18.3	19.1
85°	8.1	8.1	8.1	8.8	9.6	10.2	11.0	11.7	11.7
87.5°	2.2	3.0	3.0	3.6	4.4	4.4	5.1	5.1	5.1
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)