

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: P592617

Luminaire Tested: **HC410D010-HM40525850-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC410D010-HM40525850-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 916.0 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

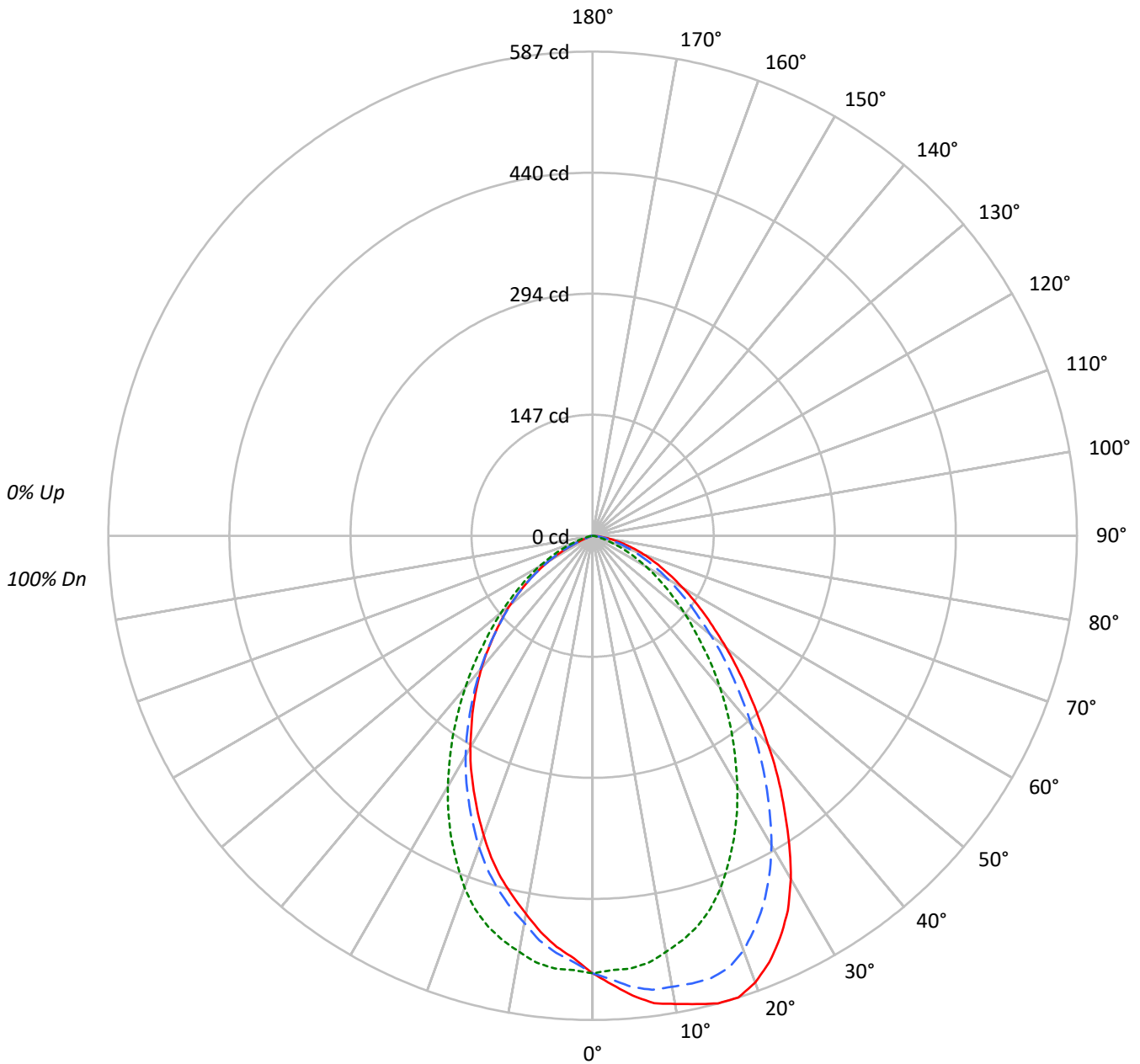
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	65410	65410	65410
5°	69300	65202	61933
10°	72181	64152	58291
15°	74945	62623	54820
20°	75646	59606	50693
25°	73193	55133	46395
30°	68436	49949	42215
35°	60999	44420	37945
40°	53329	38628	33765
45°	46453	32777	29218
50°	40528	27805	25042
55°	35526	23031	20279
60°	31083	18601	14875
65°	27055	13893	8376
70°	23694	8980	2705
75°	19396	4670	715
80°	14491	2202	568
85°	8491	1132	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.1	5.5
10°-20°	140.1	15.3
20°-30°	193.7	21.1
30°-40°	194.7	21.3
40°-50°	157.2	17.2
50°-60°	106.2	11.6
60°-70°	54.1	5.9
70°-80°	17.3	1.9
80°-90°	2.7	0.3
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°	383.8	41.9
0°-40°	578.5	63.2
0°-60°	841.9	91.9
0°-90°	916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	916.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	530	530	530	530	530	
5°	560	549	527	508	500	54
15°	587	555	490	444	429	165
25°	538	491	405	355	341	246
35°	405	366	295	258	252	253
45°	266	238	188	168	168	206
55°	165	143	107	94	94	148
65°	93	75	48	31	29	93
75°	41	29	10	2	2	44
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°	530.3	530.3	530.3	530.3	530.3	530.3	530.3	530.3	530.3
2.5°	544.6	541.6	538.6	533.3	527.2	521.2	517.4	514.5	512.9
5°	559.7	555.9	549.2	537.8	526.6	516.0	507.7	502.4	500.2
7.5°	571.7	566.5	555.2	539.3	522.0	505.4	494.8	487.3	484.3
10°	576.3	570.3	555.2	534.1	512.2	491.8	476.7	469.2	465.4
12.5°	581.6	574.8	555.9	529.5	502.4	478.3	460.9	451.1	447.3
15°	586.9	577.8	555.2	522.8	490.4	462.4	443.6	433.7	429.3
17.5°	586.9	576.3	549.2	511.4	474.4	445.1	423.9	412.6	408.9
20°	576.3	564.2	534.9	493.3	454.1	422.4	402.1	390.8	386.2
22.5°	559.7	546.1	514.5	471.5	429.9	399.1	378.7	368.1	363.6
25°	537.8	524.3	491.0	446.6	405.1	374.2	355.3	345.5	340.9
27.5°	512.2	497.1	464.0	419.4	378.7	349.3	332.0	322.9	319.1
30°	480.5	466.1	433.7	390.0	350.7	323.6	307.7	299.5	296.4
32.5°	443.6	431.5	399.8	359.0	322.1	297.2	282.9	276.1	273.1
35°	405.1	393.7	365.9	328.1	295.0	271.5	258.0	253.4	252.0
37.5°	368.8	359.0	332.0	297.2	267.1	246.7	234.5	231.6	230.1
40°	331.2	324.3	299.5	267.8	239.9	221.8	212.0	209.7	209.7
42.5°	297.2	289.6	267.8	239.1	214.3	196.1	189.4	187.1	187.9
45°	266.3	258.8	238.4	212.0	187.9	172.7	167.5	167.5	167.5
47.5°	237.6	230.8	212.0	184.8	165.2	153.2	147.8	147.8	148.6
50°	211.2	206.7	185.6	162.2	144.9	133.5	129.7	128.9	130.5
52.5°	186.3	181.1	162.2	141.1	124.5	115.4	111.6	110.8	111.6
55°	165.2	159.2	142.6	122.2	107.1	98.1	93.5	92.7	94.3
57.5°	144.9	140.3	122.9	104.8	90.5	81.5	77.7	76.1	76.9
60°	126.0	121.4	105.6	88.3	75.4	66.3	61.1	59.6	60.3
62.5°	108.7	104.8	89.8	73.2	60.3	52.0	46.8	43.0	44.5
65°	92.7	89.0	75.4	58.8	47.6	38.5	31.0	27.9	28.7
67.5°	79.2	74.7	61.9	46.8	35.5	25.6	17.3	15.8	15.8
70°	65.7	61.1	49.7	36.2	24.9	13.5	7.5	7.5	7.5
72.5°	52.8	49.0	38.5	27.2	15.8	6.0	3.1	3.1	3.1
75°	40.7	37.7	28.7	18.9	9.8	3.1	2.3	1.5	1.5
77.5°	30.2	27.2	20.4	12.9	6.0	1.5	1.5	1.5	1.5
80°	20.4	18.1	13.5	7.5	3.1	0.8	0.8	0.8	0.8
82.5°	12.1	10.6	7.5	3.8	1.5	0.8	0.8	0.8	0.8
85°	6.0	4.6	3.1	1.5	0.8	0.8	0.8	0.8	0.8
87.5°	1.5	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
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)