

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: P592618

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592618
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: HC410D010-HM40525850-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1145.4 lumens
Efficiency: N/A
Efficacy: 115.7 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

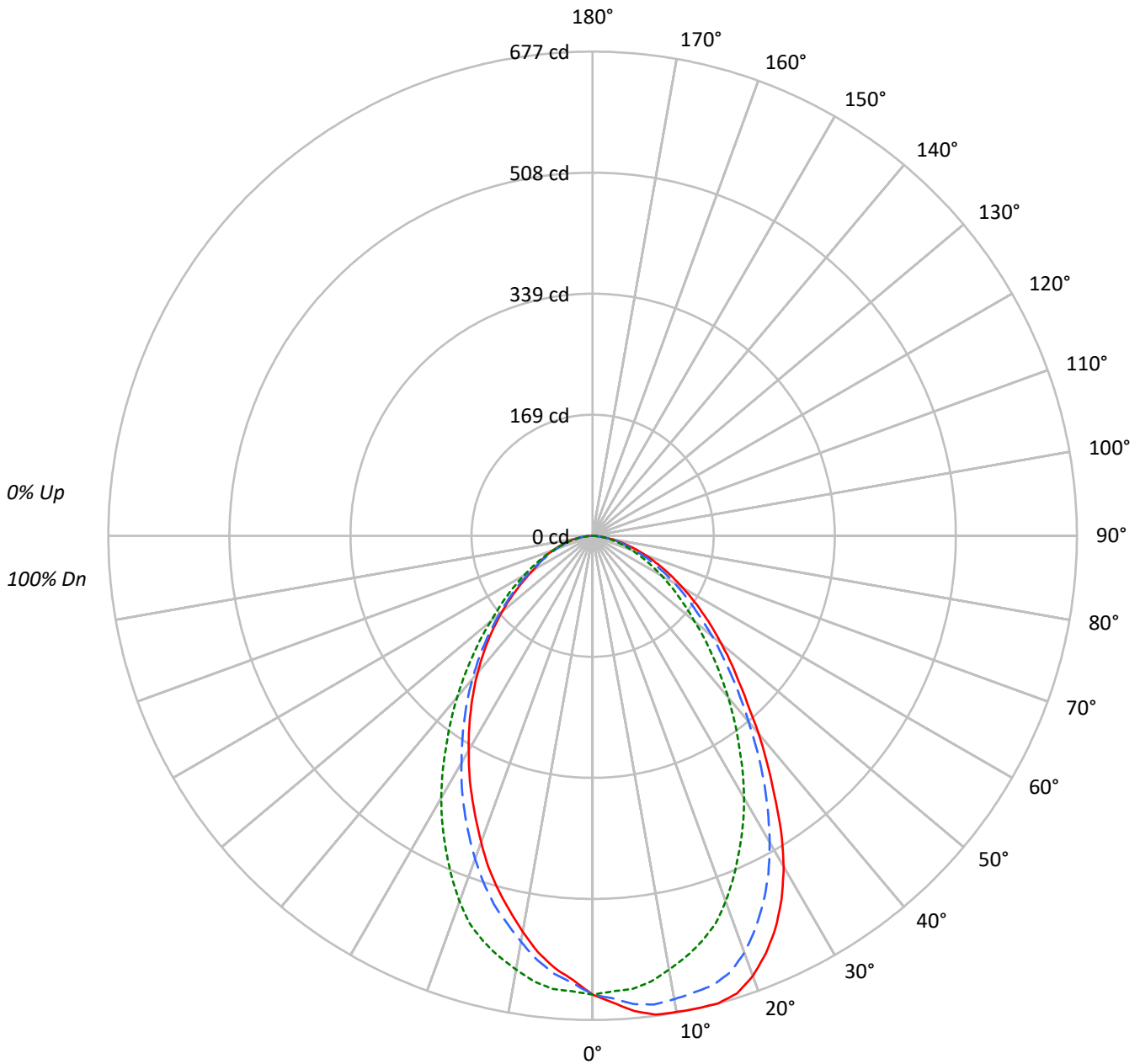
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	79114	79114	79114
5°	82586	78760	75120
10°	84680	77128	70415
15°	86438	75060	65317
20°	85963	71419	59829
25°	82366	66021	54425
30°	76085	60289	49323
35°	66691	53636	44661
40°	58062	47387	40222
45°	50534	41324	35934
50°	45037	35615	31701
55°	40235	31332	27440
60°	35943	27383	23633
65°	31930	24020	22444
70°	28022	20701	20989
75°	23733	17633	19396
80°	18184	15059	17687
85°	10614	11746	15001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	5.2
10°-20°	165.8	14.5
20°-30°	226.6	19.8
30°-40°	227.5	19.9
40°-50°	188.2	16.4
50°-60°	136.4	11.9
60°-70°	86.4	7.5
70°-80°	43.7	3.8
80°-90°	10.7	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°	452.5	39.5
0°-40°	680.0	59.4
0°-60°	1004.6	87.7
0°-90°	1145.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1145.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	641	641	641	641	641	
5°	667	657	636	615	607	64
15°	677	650	588	534	512	190
25°	605	565	485	424	400	277
35°	443	416	356	312	297	278
45°	290	273	237	214	206	225
55°	187	170	146	133	128	168
65°	109	97	82	74	77	109
75°	50	43	37	38	41	53
85°	8	8	8	10	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°	641.4	641.4	641.4	641.4	641.4	641.4	641.4	641.4	641.4
2.5°	653.4	651.2	647.4	642.9	637.6	631.6	626.2	623.3	621.8
5°	667.0	664.0	657.2	647.4	636.1	624.8	615.0	608.9	606.7
7.5°	675.3	670.9	661.0	645.9	628.5	611.9	597.6	589.3	587.1
10°	676.1	670.9	658.0	637.6	615.8	593.8	576.5	564.4	562.2
12.5°	676.9	670.1	654.2	630.0	602.9	575.7	554.5	540.2	536.5
15°	676.9	670.1	650.5	621.8	587.8	556.8	533.5	516.9	511.5
17.5°	670.9	663.2	639.9	606.7	569.7	535.0	507.8	490.5	485.1
20°	654.9	646.6	620.2	584.0	544.1	507.8	480.7	462.6	455.8
22.5°	632.3	622.5	594.6	555.3	515.4	478.4	452.0	433.1	427.1
25°	605.2	595.3	565.1	526.7	485.1	450.4	424.0	406.7	399.9
27.5°	572.0	561.4	532.0	493.4	455.0	420.3	396.1	380.3	373.5
30°	534.2	522.9	495.0	458.0	423.3	390.1	366.7	353.9	346.3
32.5°	490.5	480.7	455.8	422.5	390.1	358.4	338.8	327.5	321.5
35°	442.9	437.7	416.5	387.8	356.2	329.8	312.4	301.8	296.6
37.5°	400.7	395.3	377.2	353.1	325.2	301.1	286.8	277.7	273.1
40°	360.6	356.2	338.8	318.4	294.3	273.1	261.1	254.2	249.8
42.5°	321.5	319.2	304.9	286.0	264.8	246.7	236.9	231.7	227.8
45°	289.7	286.8	273.1	255.0	236.9	221.8	213.5	209.7	206.0
47.5°	261.9	258.1	243.8	227.8	211.3	197.7	190.2	186.4	184.8
50°	234.7	230.9	218.0	202.2	185.6	175.8	169.8	166.0	165.2
52.5°	210.5	206.8	192.4	177.3	164.4	156.2	150.9	147.1	145.7
55°	187.1	182.6	170.5	156.2	145.7	138.0	132.8	129.0	127.6
57.5°	166.0	161.5	150.9	137.4	127.6	120.7	116.2	112.4	111.0
60°	145.7	141.9	132.0	119.3	111.0	104.9	100.4	97.3	95.8
62.5°	126.8	123.7	113.9	102.6	95.8	90.6	86.8	83.8	85.2
65°	109.4	106.4	97.3	87.5	82.3	76.9	74.0	74.0	76.9
67.5°	92.9	89.8	82.3	74.0	69.4	65.7	63.4	65.7	67.9
70°	77.7	74.7	67.9	61.1	57.4	54.3	54.3	56.6	58.2
72.5°	63.4	60.3	55.1	49.8	46.8	44.5	46.8	48.3	49.8
75°	49.8	47.6	43.0	39.3	37.0	36.2	38.5	39.9	40.7
77.5°	37.0	35.5	32.4	29.5	27.9	28.7	31.0	31.6	32.4
80°	25.6	24.9	22.6	21.2	21.2	21.8	23.4	24.1	24.9
82.5°	15.8	15.8	14.3	13.5	14.3	15.8	16.6	17.4	17.4
85°	7.5	8.3	7.5	7.5	8.3	9.8	9.8	10.6	10.6
87.5°	2.3	2.3	3.1	3.1	3.8	3.8	3.8	3.8	4.6
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)