

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: P579787

Luminaire Tested: **HC410D010-HM40525930-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579787
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC410D010-HM40525930-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 959.9 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

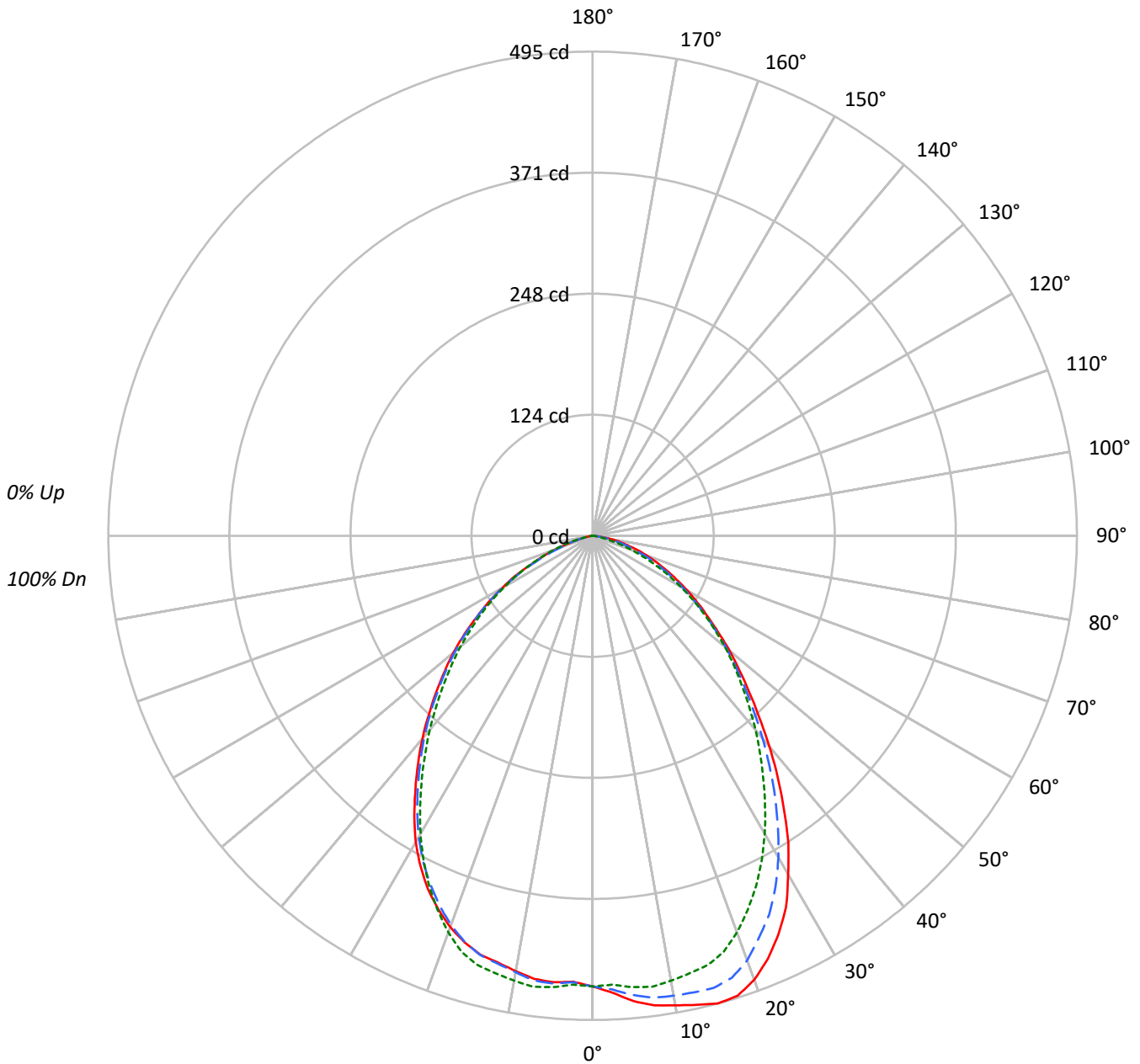
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P579787

CATALOG NUMBER: HC410D010-HM40525930-41RWWC

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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76																			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41																			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	56825	56825	56825
5°	59123	57352	56733
10°	61046	57852	56600
15°	63197	58025	56608
20°	63413	56626	55878
25°	61162	53785	54221
30°	56928	50106	51516
35°	51272	45836	47522
40°	45197	41703	43587
45°	39527	37574	39423
50°	35001	33811	35596
55°	30795	29848	31053
60°	27481	25483	26248
65°	24166	20722	20372
70°	21097	15255	13921
75°	17538	9198	7435
80°	13283	3552	2202
85°	6085	849	849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	4.6
10°-20°	129.7	13.5
20°-30°	187.8	19.6
30°-40°	198.1	20.6
40°-50°	171.5	17.9
50°-60°	127.0	13.2
60°-70°	73.2	7.6
70°-80°	25.6	2.7
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°	361.9	37.7
0°-40°	560.0	58.3
0°-60°	858.4	89.4
0°-90°	959.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	959.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	461	461	461	461	461	
5°	478	471	463	459	458	46
15°	495	479	454	444	443	139
25°	449	427	395	393	398	206
35°	340	325	304	311	316	213
45°	227	220	215	224	226	176
55°	143	140	139	144	144	129
65°	83	78	71	67	70	83
75°	37	31	19	16	16	40
85°	4	2	1	1	1	7
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°	460.7	460.7	460.7	460.7	460.7	460.7	460.7	460.7	460.7
2.5°	467.5	466.2	464.4	461.9	459.4	457.5	456.9	456.3	456.3
5°	477.5	475.0	471.2	466.2	463.2	461.2	459.4	458.2	458.2
7.5°	484.3	481.8	476.3	469.3	465.0	461.2	458.7	456.9	456.9
10°	487.4	484.3	477.5	468.7	461.9	456.9	453.2	451.9	451.9
12.5°	491.2	487.4	478.1	466.9	458.2	451.9	448.1	446.9	446.9
15°	494.9	490.5	478.6	465.7	454.4	446.9	443.8	443.3	443.3
17.5°	493.0	487.4	473.7	458.2	445.8	438.2	435.2	435.2	435.7
20°	483.1	477.5	461.9	444.5	431.4	425.7	423.3	424.6	425.7
22.5°	468.1	461.2	444.5	427.7	414.0	409.0	409.0	410.8	412.8
25°	449.4	443.3	427.0	408.3	395.2	391.6	392.8	395.9	398.4
27.5°	428.2	421.4	404.7	387.1	374.1	372.2	375.3	379.8	381.0
30°	399.7	394.1	379.8	362.9	351.8	351.1	355.4	358.6	361.7
32.5°	372.2	366.0	352.3	336.2	328.1	328.7	333.7	337.4	339.2
35°	340.5	334.9	324.9	311.8	304.4	305.7	311.2	315.0	315.6
37.5°	310.7	306.9	296.9	287.0	281.3	283.8	288.8	293.1	293.1
40°	280.7	277.7	270.2	262.1	259.0	262.1	267.1	270.7	270.7
42.5°	252.1	250.2	244.0	238.4	236.6	240.9	245.2	248.4	247.7
45°	226.6	224.8	220.3	216.0	215.4	219.7	223.5	225.3	226.0
47.5°	203.6	202.3	198.6	195.5	195.5	199.8	202.9	204.8	205.4
50°	182.4	181.2	178.0	175.6	176.2	180.5	183.0	184.9	185.5
52.5°	161.3	160.6	158.1	155.0	156.8	160.0	163.1	164.3	165.0
55°	143.2	143.2	140.1	137.6	138.8	141.9	143.8	144.4	144.4
57.5°	127.0	126.3	122.7	120.2	120.7	123.9	125.1	125.7	125.7
60°	111.4	110.8	107.1	103.3	103.3	105.2	105.8	106.4	106.4
62.5°	96.5	95.8	91.5	88.4	87.2	86.5	86.5	87.7	90.2
65°	82.8	82.2	77.8	72.8	71.0	69.1	67.3	68.5	69.8
67.5°	70.3	69.1	64.8	60.4	56.0	52.9	49.8	51.7	54.2
70°	58.5	57.2	52.2	47.3	42.3	37.3	34.8	37.3	38.6
72.5°	47.3	46.1	41.1	36.1	29.9	24.9	24.2	24.9	25.5
75°	36.8	36.1	31.2	25.5	19.3	15.6	15.6	15.6	15.6
77.5°	27.4	26.2	21.2	16.2	11.2	8.8	8.1	8.1	8.1
80°	18.7	17.4	13.1	9.3	5.0	3.8	3.8	3.1	3.1
82.5°	10.6	10.0	6.8	3.8	1.8	1.3	1.3	1.3	1.3
85°	4.3	3.8	2.5	1.3	0.6	0.6	0.6	0.6	0.6
87.5°	0.6	0.6	0.6	0.0	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)