

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: P579823

Luminaire Tested: **HC410D010-HM40525940-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579823
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-HM40525940-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1047.7 lumens
Efficiency: N/A
Efficacy: 105.8 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

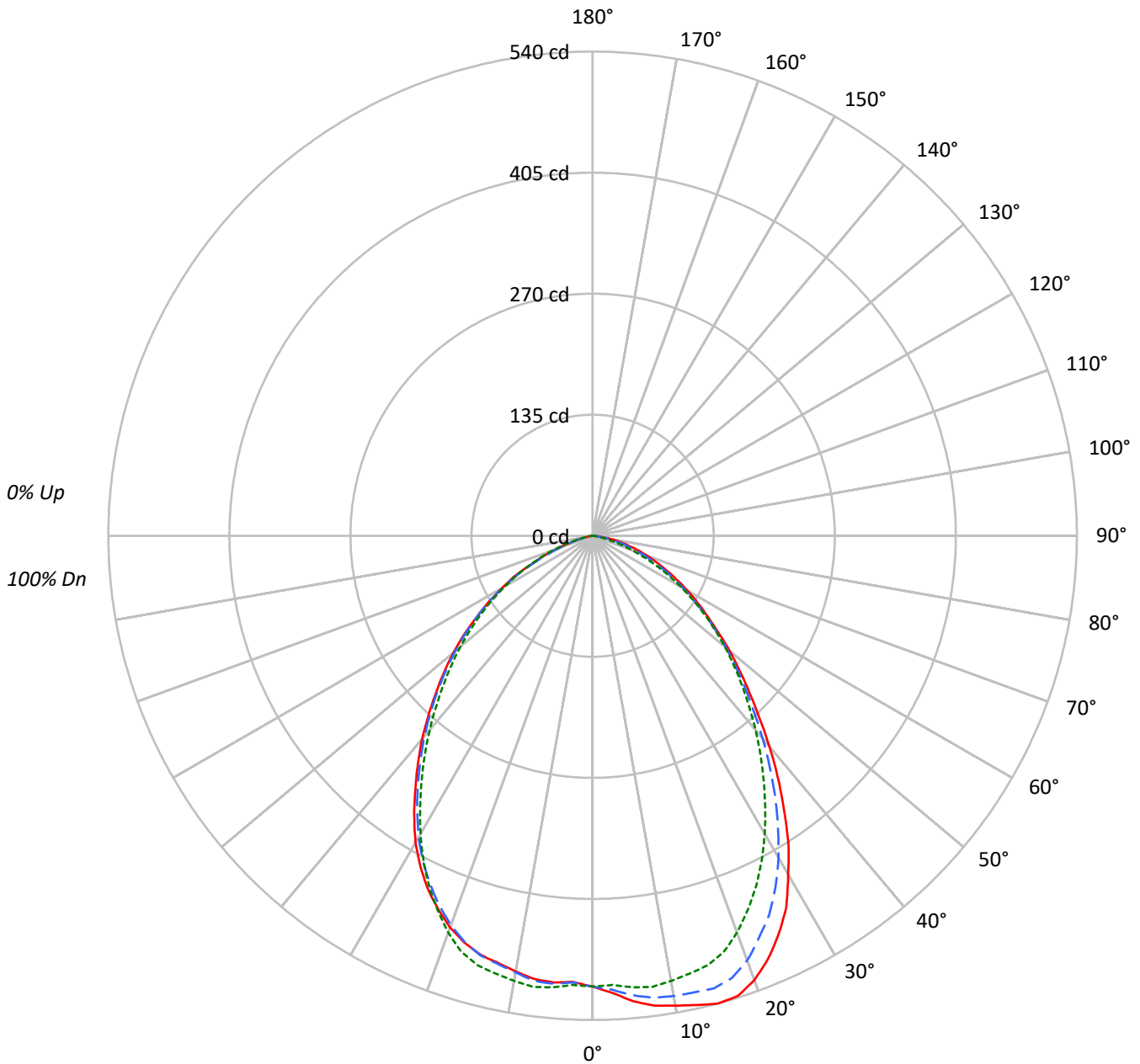
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	62018	62018	62018
5°	64521	62589	61908
10°	66632	63138	61785
15°	68969	63325	61780
20°	69201	61798	61010
25°	66769	58712	59175
30°	62127	54664	56230
35°	55970	50037	51874
40°	49351	45519	47580
45°	43138	41010	43016
50°	38186	36901	38858
55°	33590	32580	33891
60°	30022	27827	28666
65°	26384	22619	22211
70°	23009	16661	15183
75°	19110	10056	8102
80°	14491	3907	2415
85°	6793	991	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	4.6
10°-20°	141.5	13.5
20°-30°	205.0	19.6
30°-40°	216.2	20.6
40°-50°	187.1	17.9
50°-60°	138.6	13.2
60°-70°	79.9	7.6
70°-80°	27.9	2.7
80°-90°	2.9	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°	395.0	37.7
0°-40°	611.2	58.3
0°-60°	937.0	89.4
0°-90°	1047.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1047.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	503	503	503	503	503	
5°	521	514	506	501	500	50
15°	540	522	496	484	484	152
25°	491	466	431	429	435	225
35°	372	355	332	340	344	232
45°	247	241	235	244	247	192
55°	156	153	152	157	158	141
65°	90	85	78	73	76	90
75°	40	34	21	17	17	43
85°	5	3	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°	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8	502.8
2.5°	510.3	508.9	506.9	504.1	501.4	499.4	498.7	498.0	498.0
5°	521.1	518.4	514.4	508.9	505.5	503.5	501.4	500.0	500.0
7.5°	528.6	525.9	519.7	512.3	507.5	503.5	500.7	498.7	498.7
10°	532.0	528.6	521.1	511.6	504.1	498.7	494.6	493.3	493.3
12.5°	536.1	532.0	521.8	509.6	500.0	493.3	489.2	487.9	487.9
15°	540.1	535.4	522.5	508.2	495.9	487.9	484.4	483.8	483.8
17.5°	538.2	532.0	517.0	500.0	486.5	478.3	474.9	474.9	475.6
20°	527.2	521.1	504.1	485.1	470.8	464.8	462.0	463.4	464.8
22.5°	511.0	503.5	485.1	466.8	451.8	446.4	446.4	448.4	450.4
25°	490.6	483.8	466.1	445.8	431.4	427.3	428.7	432.1	434.8
27.5°	467.5	460.0	441.7	422.7	408.3	406.3	409.7	414.5	415.8
30°	436.2	430.1	414.5	396.1	383.8	383.2	387.9	391.4	394.8
32.5°	406.3	399.6	384.5	366.9	358.0	358.7	364.2	368.3	370.3
35°	371.7	365.5	354.7	340.4	332.3	333.5	339.7	343.8	344.5
37.5°	339.0	334.9	324.1	313.2	307.1	309.8	315.2	320.0	320.0
40°	306.5	303.0	294.9	286.1	282.7	286.1	291.4	295.5	295.5
42.5°	275.2	273.1	266.3	260.3	258.2	263.0	267.7	271.1	270.4
45°	247.3	245.2	240.6	235.8	235.1	239.9	243.9	245.9	246.6
47.5°	222.1	220.8	216.8	213.4	213.4	218.0	221.5	223.5	224.2
50°	199.0	197.7	194.4	191.6	192.3	197.0	199.7	201.8	202.5
52.5°	175.9	175.3	172.5	169.2	171.3	174.6	178.0	179.3	180.0
55°	156.2	156.2	152.8	150.1	151.5	154.9	156.9	157.6	157.6
57.5°	138.6	137.9	133.8	131.1	131.8	135.2	136.6	137.2	137.2
60°	121.7	121.0	116.9	112.8	112.8	114.8	115.5	116.2	116.2
62.5°	105.3	104.6	99.9	96.5	95.1	94.5	94.5	95.8	98.6
65°	90.4	89.7	84.9	79.5	77.5	75.4	73.4	74.8	76.1
67.5°	76.8	75.4	70.7	65.9	61.1	57.7	54.4	56.4	59.1
70°	63.8	62.5	57.1	51.7	46.2	40.7	38.0	40.7	42.1
72.5°	51.7	50.3	44.8	39.4	32.7	27.2	26.5	27.2	27.9
75°	40.1	39.4	34.0	27.9	21.1	17.0	17.0	17.0	17.0
77.5°	29.9	28.6	23.1	17.6	12.2	9.6	8.9	8.9	8.9
80°	20.4	19.0	14.2	10.2	5.5	4.1	4.1	3.4	3.4
82.5°	11.5	10.9	7.5	4.1	2.0	1.4	1.4	1.4	1.4
85°	4.8	4.1	2.7	1.4	0.7	0.7	0.7	0.7	0.7
87.5°	0.7	0.7	0.7	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)