

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: P592616

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592616  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC410D010-HM40525850-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1157.4 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

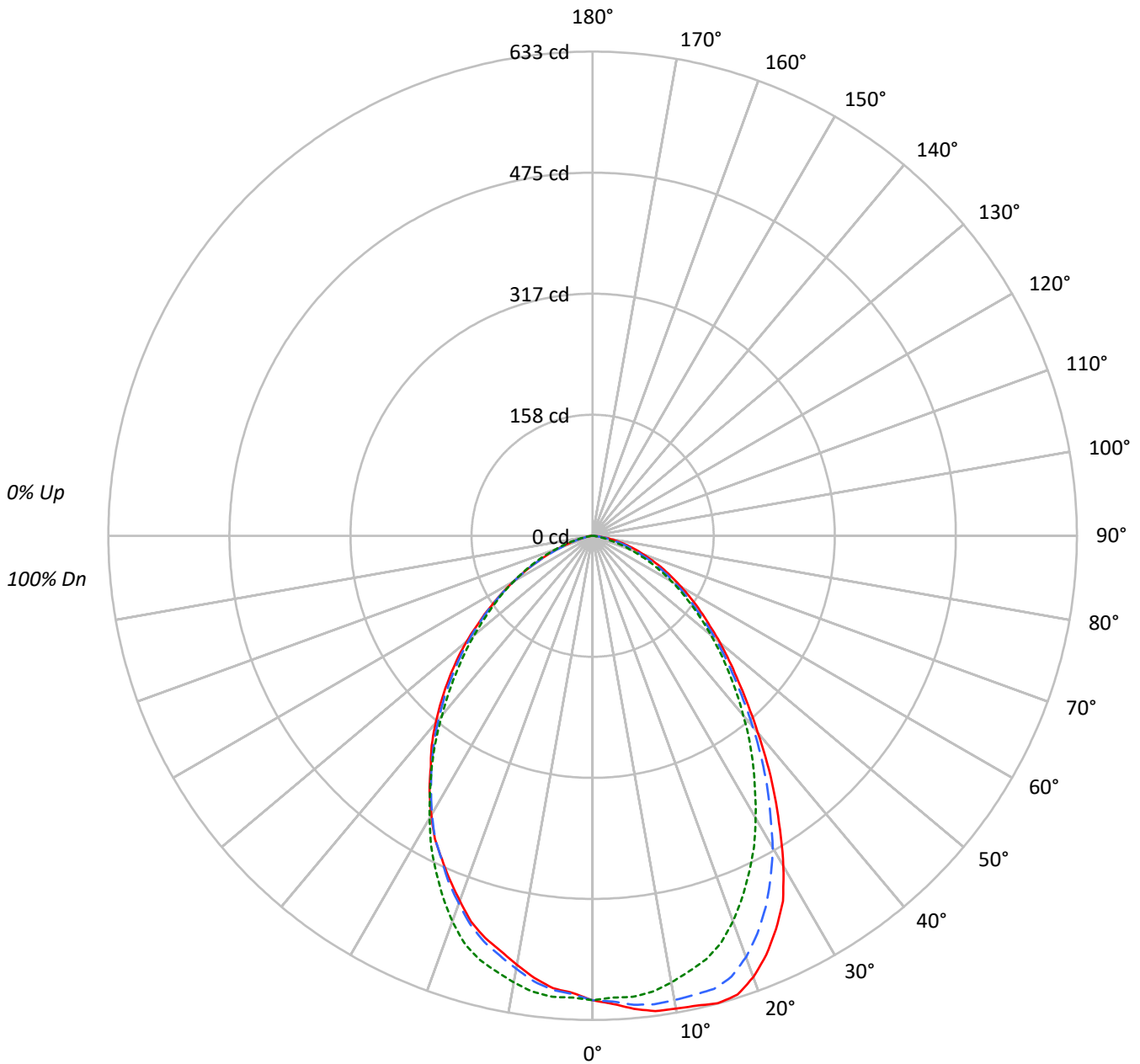
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	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	41	37	47	41	37	46	41	37	35																			
10	58	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°	74895	74895	74895
5°	76865	74909	73510
10°	78606	74260	71342
15°	80807	73209	69454
20°	80608	70396	66642
25°	77208	65912	63448
30°	71028	60702	60047
35°	62474	55096	55533
40°	54053	49303	51380
45°	46976	43819	46453
50°	41679	38647	41257
55°	36988	33891	35354
60°	32933	29381	29381
65°	29303	24458	22882
70°	25281	18501	16337
75°	21207	12200	10103
80°	16053	5896	5327
85°	8491	2123	2123



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	5.0
10°-20°	163.0	14.1
20°-30°	229.9	19.9
30°-40°	237.5	20.5
40°-50°	201.4	17.4
50°-60°	146.5	12.7
60°-70°	85.6	7.4
70°-80°	31.8	2.7
80°-90°	4.2	0.4
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°	450.5	38.9
0°-40°	688.0	59.4
0°-60°	1035.8	89.5
0°-90°	1157.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1157.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	607	607	607	607	607	
5°	621	616	605	596	594	59
15°	633	613	573	549	544	178
25°	567	536	484	467	466	259
35°	415	397	366	367	369	259
45°	269	262	251	260	266	210
55°	172	164	158	163	164	155
65°	100	92	84	78	78	100
75°	44	37	26	20	21	48
85°	6	4	2	2	2	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°	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2
2.5°	612.6	611.0	609.5	607.2	604.3	602.0	599.7	598.2	598.2
5°	620.8	618.6	615.5	610.3	605.0	600.4	596.0	593.7	593.7
7.5°	626.8	623.9	617.8	610.3	601.2	594.4	587.7	584.6	583.1
10°	627.6	624.6	616.3	605.0	592.9	582.3	574.8	570.3	569.6
12.5°	629.1	625.3	614.7	598.9	583.1	570.3	561.9	557.5	555.9
15°	632.8	627.6	613.3	592.9	573.3	558.2	549.2	545.4	543.9
17.5°	629.1	621.6	604.3	580.0	558.2	541.6	532.6	528.8	528.8
20°	614.1	606.4	586.2	559.8	536.3	520.5	511.4	509.1	507.7
22.5°	592.9	584.6	562.7	534.9	511.4	497.1	491.0	488.1	487.3
25°	567.3	559.0	535.5	506.9	484.3	472.3	466.9	466.9	466.2
27.5°	538.6	528.0	503.9	479.0	457.1	448.0	445.9	445.9	446.6
30°	498.7	491.0	470.7	446.6	426.2	420.1	420.1	421.6	421.6
32.5°	455.7	450.3	432.2	411.2	395.2	391.5	393.1	396.0	396.8
35°	414.9	408.9	396.8	377.9	365.9	364.4	366.7	368.8	368.8
37.5°	374.9	368.8	360.6	345.5	336.4	337.2	340.3	343.2	345.5
40°	335.7	331.2	325.1	313.1	306.2	309.3	313.1	316.0	319.1
42.5°	301.0	296.4	291.9	282.9	278.4	282.1	286.7	289.6	292.7
45°	269.3	266.3	261.7	254.2	251.2	255.0	260.3	263.2	266.3
47.5°	242.2	240.7	234.7	227.8	226.3	230.1	234.7	238.4	240.7
50°	217.2	215.0	209.7	202.9	201.4	207.5	210.4	212.7	215.0
52.5°	193.1	190.8	184.8	178.8	178.8	183.3	185.6	186.3	188.6
55°	172.0	169.7	163.6	159.2	157.6	161.5	163.0	163.0	164.4
57.5°	152.4	150.1	144.1	138.8	138.0	140.3	140.3	140.3	141.1
60°	133.5	131.2	125.2	120.7	119.1	119.9	119.1	118.5	119.1
62.5°	116.2	113.9	107.9	102.6	101.1	101.1	98.8	98.1	98.8
65°	100.4	96.5	92.1	86.7	83.8	81.5	78.4	78.4	78.4
67.5°	84.4	81.5	76.1	70.9	67.1	63.4	58.8	60.3	61.1
70°	70.1	67.9	61.9	56.6	51.3	46.8	43.0	44.5	45.3
72.5°	57.4	54.3	49.0	43.0	38.5	32.4	30.2	31.6	31.6
75°	44.5	41.5	37.0	31.0	25.6	20.4	20.4	21.2	21.2
77.5°	33.2	30.2	25.6	20.4	15.8	12.1	12.9	12.9	12.9
80°	22.6	20.4	16.6	12.1	8.3	6.8	6.8	6.8	7.5
82.5°	12.9	11.3	9.1	6.0	3.8	3.8	3.8	3.8	3.8
85°	6.0	4.6	3.8	2.3	1.5	1.5	1.5	1.5	1.5
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)