

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: P580933

Luminaire Tested: **HC450D010-HM44560930-41WDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580933
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560930-41WDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3950.8 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

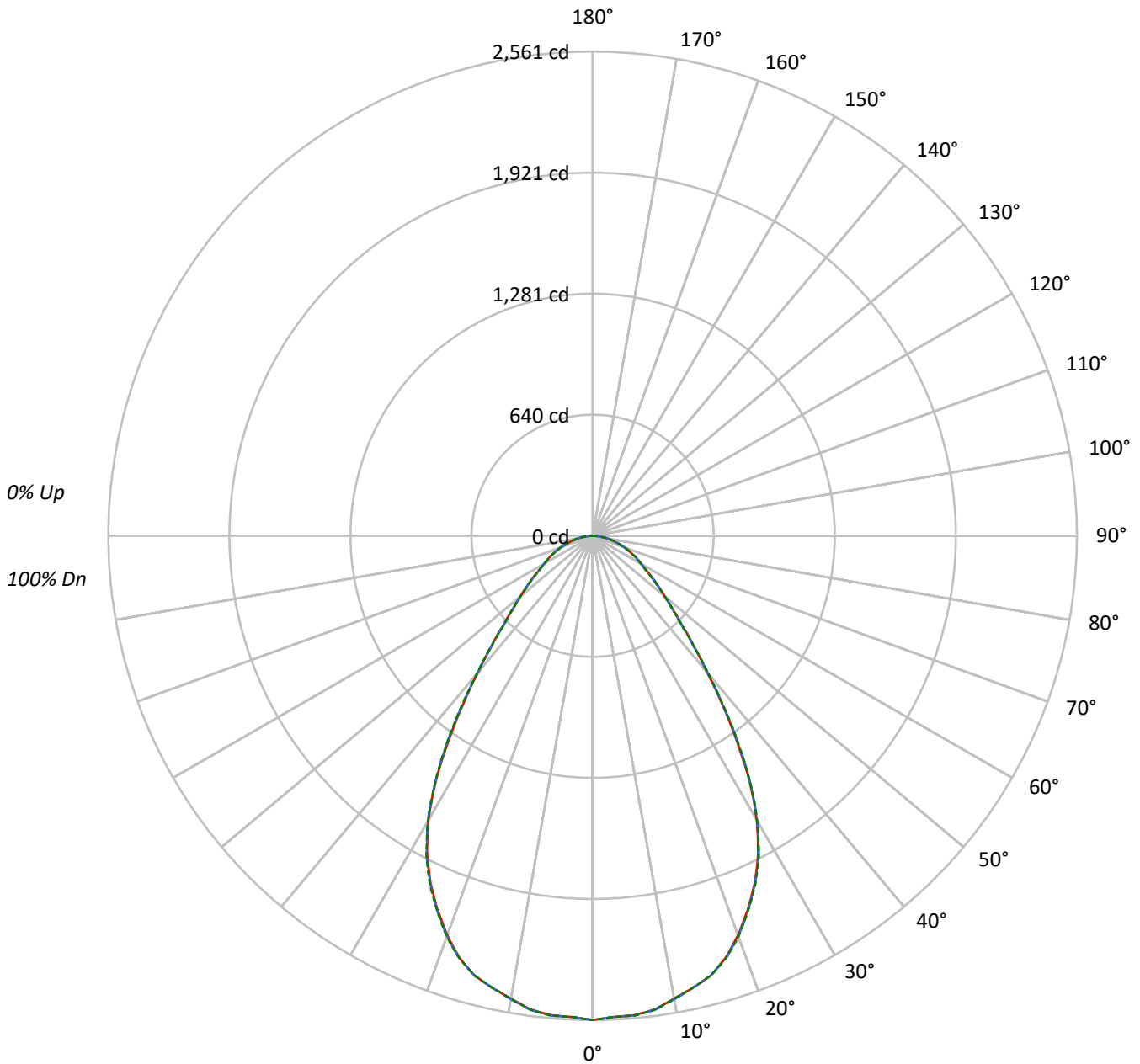
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89																			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78																			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69																			
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56																			
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51																			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46																			
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39																			
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	315851	315851	315851
5°	315089	315411	315411
10°	311418	311756	311418
15°	307698	307698	307698
20°	295063	295759	296100
25°	275991	276345	277066
30°	247296	248037	248037
35°	200780	202376	202767
40°	151532	152386	152804
45°	116053	115599	115599
50°	95639	95121	95121
55°	82083	81503	81503
60°	73243	72577	72577
65°	68850	68850	68850
70°	64049	64049	64049
75°	58142	59333	58142
80°	54553	52706	54553
85°	45004	45004	45004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.3	6.1
10°-20°	675.2	17.1
20°-30°	927.8	23.5
30°-40°	834.2	21.1
40°-50°	527.1	13.3
50°-60°	344.1	8.7
60°-70°	233.1	5.9
70°-80°	131.2	3.3
80°-90°	36.9	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°	1844.2	46.7
0°-40°	2678.4	67.8
0°-60°	3549.6	89.8
0°-90°	3950.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3950.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2561	2561	2561	2561	2561	
5°	2545	2545	2547	2547	2547	241
15°	2410	2410	2410	2410	2410	675
25°	2028	2030	2030	2036	2036	926
35°	1333	1339	1344	1349	1347	830
45°	665	663	663	663	663	528
55°	382	382	379	382	379	345
65°	236	236	236	236	236	234
75°	122	124	124	124	122	131
85°	32	32	32	32	32	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2560.7	2560.7	2560.7	2560.7	2560.7
2.5°	2547.4	2547.4	2547.4	2547.4	2547.4
5°	2544.8	2544.8	2547.4	2547.4	2547.4
7.5°	2526.2	2528.8	2528.8	2528.8	2528.8
10°	2486.4	2486.4	2489.1	2489.1	2486.4
12.5°	2449.3	2449.3	2449.3	2452.0	2449.3
15°	2409.6	2409.6	2409.6	2409.6	2409.6
17.5°	2340.6	2343.3	2343.3	2343.3	2343.3
20°	2247.9	2253.2	2253.2	2255.8	2255.8
22.5°	2141.8	2144.5	2147.1	2149.8	2147.1
25°	2027.9	2030.5	2030.5	2035.8	2035.8
27.5°	1895.3	1898.0	1903.3	1903.3	1903.3
30°	1736.3	1738.9	1741.5	1741.5	1741.5
32.5°	1548.0	1548.0	1553.3	1556.0	1553.3
35°	1333.4	1338.7	1344.0	1349.2	1346.6
37.5°	1129.3	1134.6	1137.2	1137.2	1139.9
40°	941.1	946.4	946.4	951.7	949.0
42.5°	792.6	790.0	790.0	795.3	792.6
45°	665.3	662.7	662.7	662.7	662.7
47.5°	572.5	569.9	569.9	569.9	569.9
50°	498.4	495.7	495.7	495.7	495.7
52.5°	437.4	434.7	434.7	434.7	432.1
55°	381.7	381.7	379.0	381.7	379.0
57.5°	331.3	331.3	331.3	331.3	331.3
60°	296.9	294.2	294.2	294.2	294.2
62.5°	265.1	265.1	265.1	265.1	265.1
65°	235.9	235.9	235.9	235.9	235.9
67.5°	206.8	204.1	206.8	206.8	204.1
70°	177.6	174.9	177.6	177.6	177.6
72.5°	148.4	148.4	148.4	151.1	148.4
75°	122.0	124.5	124.5	124.5	122.0
77.5°	98.1	100.7	98.1	98.1	98.1
80°	76.8	74.2	74.2	74.2	76.8
82.5°	53.0	53.0	53.0	53.0	53.0
85°	31.8	31.8	31.8	31.8	31.8
87.5°	13.3	13.3	13.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)