

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: P580863

Luminaire Tested: **HC450D010-HM44560830-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580863
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: HC450D010-HM44560830-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4797.8 lumens
Efficiency: N/A
Efficacy: 100.0 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

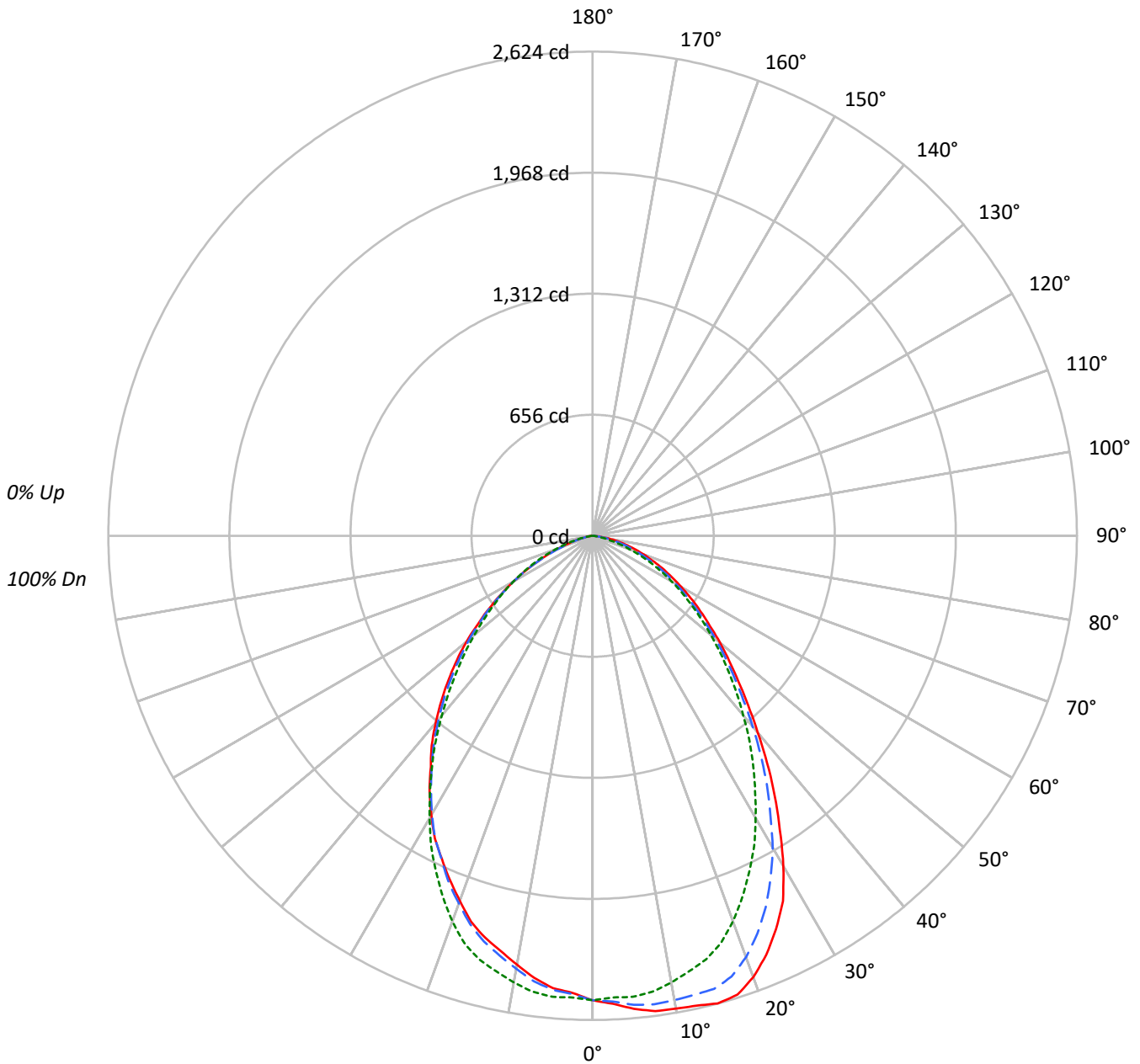
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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								
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°	310486	310486	310486
5°	318630	310508	304701
10°	325859	307836	295699
15°	335013	303471	287892
20°	334100	291834	276227
25°	320032	273214	263007
30°	294383	251640	248963
35°	258963	228365	230248
40°	224054	204410	212960
45°	194724	181624	192544
50°	172799	160210	170995
55°	153307	140554	146597
60°	136544	121890	121890
65°	121385	101276	94913
70°	104874	76708	67656
75°	87927	50659	41748
80°	66628	24435	22162
85°	35381	8774	8774



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.4	5.0
10°-20°	675.8	14.1
20°-30°	953.1	19.9
30°-40°	984.6	20.5
40°-50°	834.7	17.4
50°-60°	607.3	12.7
60°-70°	354.8	7.4
70°-80°	131.9	2.7
80°-90°	17.2	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°	1867.3	38.9
0°-40°	2851.9	59.4
0°-60°	4293.9	89.5
0°-90°	4797.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4797.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2517	2517	2517	2517	2517	
5°	2573	2552	2508	2470	2461	247
15°	2624	2542	2376	2276	2254	737
25°	2352	2220	2008	1936	1932	1075
35°	1720	1645	1517	1520	1529	1074
45°	1116	1085	1041	1079	1104	869
55°	713	679	654	675	682	641
65°	416	382	347	325	325	413
75°	184	153	106	84	88	198
85°	25	16	6	6	6	35
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°	2517.2	2517.2	2517.2	2517.2	2517.2	2517.2	2517.2	2517.2	2517.2
2.5°	2539.1	2532.8	2526.6	2517.2	2504.7	2495.3	2485.9	2479.7	2479.7
5°	2573.4	2564.1	2551.6	2529.7	2507.8	2489.1	2470.3	2460.9	2460.9
7.5°	2598.5	2586.0	2560.9	2529.7	2492.2	2464.1	2435.8	2423.3	2417.1
10°	2601.7	2589.2	2554.7	2507.8	2457.8	2414.0	2382.7	2364.0	2360.9
12.5°	2607.9	2592.3	2548.4	2482.8	2417.1	2364.0	2329.6	2310.9	2304.6
15°	2623.5	2601.7	2542.2	2457.8	2376.5	2314.0	2276.4	2260.8	2254.5
17.5°	2607.9	2576.7	2504.7	2404.6	2314.0	2245.1	2207.6	2192.0	2192.0
20°	2545.3	2514.1	2429.6	2320.2	2223.3	2157.5	2120.0	2110.7	2104.4
22.5°	2457.8	2423.3	2332.7	2217.0	2120.0	2060.7	2035.7	2023.2	2020.1
25°	2351.5	2317.1	2220.1	2101.3	2007.5	1957.5	1935.6	1935.6	1932.5
27.5°	2232.6	2188.9	2088.8	1985.6	1895.0	1857.4	1848.0	1848.0	1851.1
30°	2066.9	2035.7	1951.2	1851.1	1766.8	1741.8	1741.8	1748.0	1748.0
32.5°	1888.7	1866.7	1791.8	1704.2	1638.5	1622.9	1629.2	1641.7	1644.8
35°	1719.8	1694.8	1644.8	1566.6	1516.6	1510.3	1519.7	1529.1	1529.1
37.5°	1554.1	1529.1	1494.7	1432.1	1394.6	1397.7	1410.2	1422.7	1432.1
40°	1391.5	1372.7	1347.7	1297.7	1269.5	1282.0	1297.7	1310.2	1322.6
42.5°	1247.7	1228.9	1210.2	1172.6	1153.8	1169.4	1188.3	1200.8	1213.3
45°	1116.3	1103.8	1085.1	1053.8	1041.2	1056.9	1078.8	1091.3	1103.8
47.5°	1003.7	997.5	972.5	944.4	938.1	953.7	972.5	988.1	997.5
50°	900.5	891.1	869.3	841.1	834.9	859.9	872.4	881.8	891.1
52.5°	800.5	791.1	766.2	741.1	741.1	759.8	769.3	772.4	781.8
55°	712.9	703.6	678.6	659.8	653.6	669.2	675.4	675.4	681.7
57.5°	631.7	622.2	597.2	575.3	572.2	581.6	581.6	581.6	584.7
60°	553.5	544.1	519.1	500.4	494.1	497.2	494.1	491.0	494.1
62.5°	481.5	472.1	447.1	425.3	419.0	419.0	409.6	406.5	409.6
65°	415.9	400.3	381.5	359.6	347.0	337.7	325.2	325.2	325.2
67.5°	350.3	337.7	315.8	293.9	278.3	262.7	243.9	250.2	253.3
70°	290.8	281.4	256.4	234.6	212.7	193.8	178.2	184.5	187.6
72.5°	237.7	225.2	203.2	178.2	159.5	134.5	125.1	131.3	131.3
75°	184.5	172.0	153.2	128.2	106.3	84.5	84.5	87.6	87.6
77.5°	137.6	125.1	106.3	84.5	65.6	50.0	53.1	53.1	53.1
80°	93.8	84.5	68.7	50.0	34.4	28.1	28.1	28.1	31.2
82.5°	53.1	46.9	37.5	25.0	15.6	15.6	15.6	15.6	15.6
85°	25.0	18.7	15.6	9.4	6.2	6.2	6.2	6.2	6.2
87.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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)