

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: P580845

Luminaire Tested: **HC450D010-HM44560827-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580845
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-HM44560827-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4320.7 lumens
Efficiency: N/A
Efficacy: 90.0 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

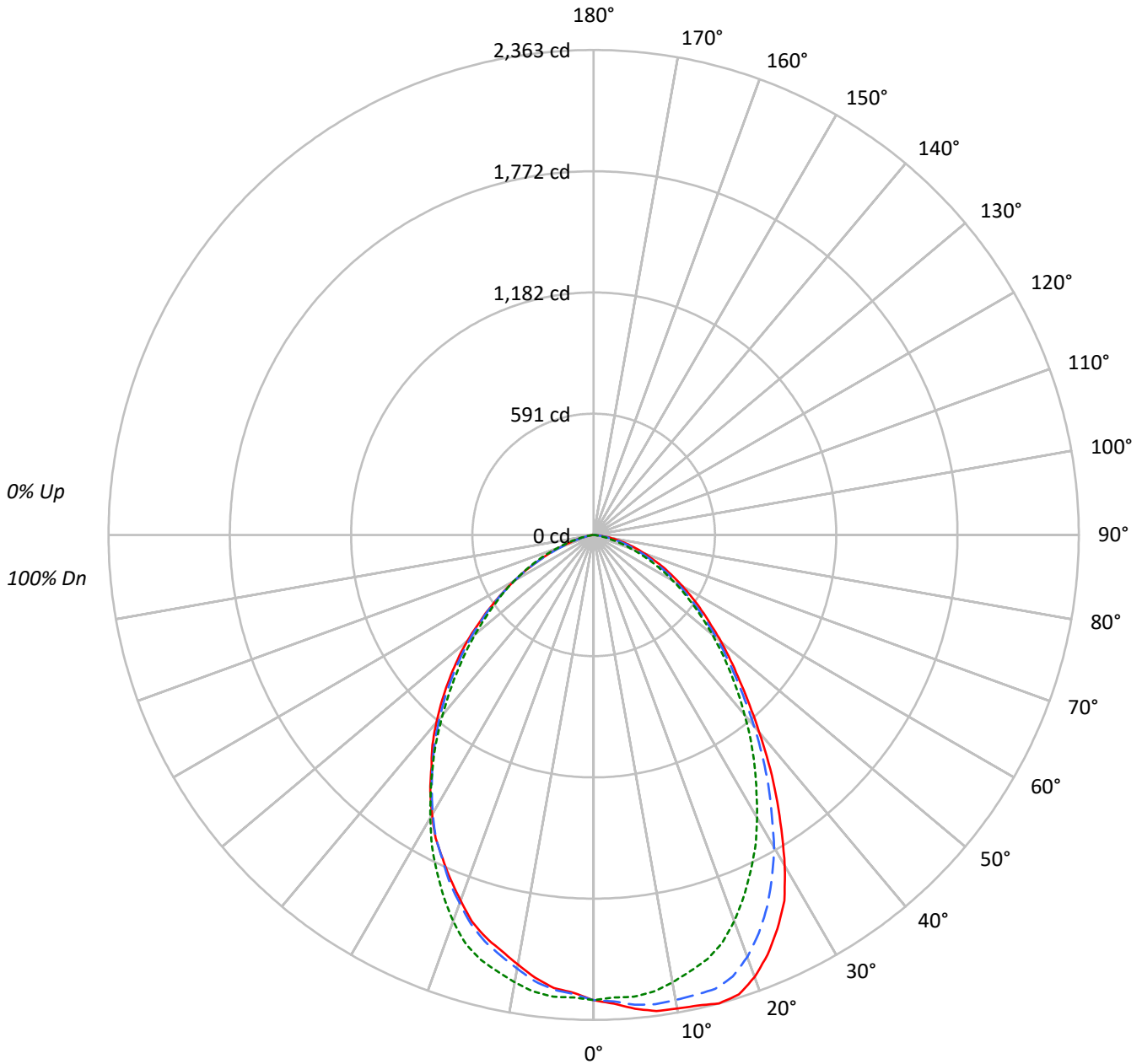
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47			47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35			35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	279612	279612	279612
5°	286958	279628	274403
10°	293457	277212	266291
15°	301709	273297	259263
20°	300891	262812	248767
25°	288212	246036	236849
30°	265114	226616	224209
35°	233214	205658	207345
40°	201770	184090	191786
45°	175362	163570	173408
50°	155624	144283	154012
55°	138081	126576	132017
60°	122976	109753	109753
65°	109302	91236	85486
70°	94451	69062	60912
75°	79206	45655	37554
80°	60022	22020	19960
85°	31984	7925	7925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.7	5.0
10°-20°	608.6	14.1
20°-30°	858.3	19.9
30°-40°	886.7	20.5
40°-50°	751.7	17.4
50°-60°	546.9	12.7
60°-70°	319.6	7.4
70°-80°	118.8	2.7
80°-90°	15.5	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°	1681.6	38.9
0°-40°	2568.3	59.4
0°-60°	3866.9	89.5
0°-90°	4320.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4320.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2267	2267	2267	2267	2267	
5°	2318	2298	2258	2225	2216	222
15°	2363	2289	2140	2050	2030	664
25°	2118	1999	1808	1743	1740	968
35°	1549	1481	1366	1369	1377	967
45°	1005	977	938	972	994	782
55°	642	611	589	608	614	578
65°	374	344	313	293	293	372
75°	166	138	96	76	79	178
85°	23	14	6	6	6	31
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°	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9
2.5°	2286.6	2281.0	2275.3	2266.9	2255.6	2247.2	2238.7	2233.0	2233.0
5°	2317.6	2309.1	2297.9	2278.1	2258.4	2241.6	2224.6	2216.2	2216.2
7.5°	2340.1	2328.8	2306.3	2278.1	2244.3	2219.0	2193.6	2182.5	2176.8
10°	2343.0	2331.7	2300.7	2258.4	2213.3	2173.9	2145.8	2128.9	2126.1
12.5°	2348.5	2334.4	2295.0	2235.9	2176.8	2128.9	2097.9	2081.0	2075.4
15°	2362.7	2343.0	2289.4	2213.3	2140.2	2083.8	2050.1	2036.0	2030.3
17.5°	2348.5	2320.4	2255.6	2165.5	2083.8	2021.9	1988.1	1974.0	1974.0
20°	2292.3	2264.0	2188.0	2089.5	2002.2	1943.0	1909.2	1900.8	1895.2
22.5°	2213.3	2182.5	2100.8	1996.6	1909.2	1855.8	1833.2	1821.9	1819.1
25°	2117.7	2086.7	1999.4	1892.3	1807.8	1762.8	1743.1	1743.1	1740.3
27.5°	2010.6	1971.2	1881.1	1788.1	1706.6	1672.7	1664.3	1664.3	1667.0
30°	1861.4	1833.2	1757.1	1667.0	1591.1	1568.5	1568.5	1574.2	1574.2
32.5°	1700.9	1681.2	1613.6	1534.7	1475.6	1461.5	1467.1	1478.4	1481.2
35°	1548.8	1526.2	1481.2	1410.9	1365.8	1360.2	1368.6	1377.0	1377.0
37.5°	1399.6	1377.0	1346.0	1289.8	1255.9	1258.8	1270.1	1281.2	1289.8
40°	1253.1	1236.2	1213.7	1168.7	1143.3	1154.6	1168.7	1180.0	1191.1
42.5°	1123.6	1106.7	1089.8	1056.0	1039.1	1053.2	1070.1	1081.3	1092.6
45°	1005.3	994.1	977.1	949.0	937.7	951.8	971.5	982.8	994.1
47.5°	904.0	898.3	875.7	850.4	844.8	858.9	875.7	889.8	898.3
50°	811.0	802.6	782.9	757.5	751.9	774.3	785.6	794.2	802.6
52.5°	720.9	712.5	689.9	667.4	667.4	684.2	692.8	695.5	704.1
55°	642.1	633.6	611.1	594.1	588.6	602.7	608.3	608.3	613.9
57.5°	568.9	560.4	537.9	518.2	515.3	523.8	523.8	523.8	526.6
60°	498.5	490.0	467.5	450.5	444.9	447.8	444.9	442.1	444.9
62.5°	433.6	425.2	402.7	383.0	377.4	377.4	368.9	366.1	368.9
65°	374.5	360.4	343.5	323.8	312.6	304.1	292.9	292.9	292.9
67.5°	315.4	304.1	284.4	264.7	250.6	236.6	219.6	225.3	228.0
70°	261.9	253.4	230.9	211.2	191.5	174.6	160.5	166.2	168.9
72.5°	214.0	202.8	183.0	160.5	143.6	121.1	112.7	118.2	118.2
75°	166.2	154.9	137.9	115.5	95.8	76.1	76.1	78.8	78.8
77.5°	123.9	112.7	95.8	76.1	59.1	45.1	47.8	47.8	47.8
80°	84.5	76.1	62.0	45.1	31.0	25.4	25.4	25.4	28.1
82.5°	47.8	42.3	33.8	22.6	14.1	14.1	14.1	14.1	14.1
85°	22.6	16.9	14.1	8.4	5.6	5.6	5.6	5.6	5.6
87.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)