

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: P581261

Luminaire Tested: **HC455D010-HM44560940-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581261
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC455D010-HM44560940-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4357.6 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

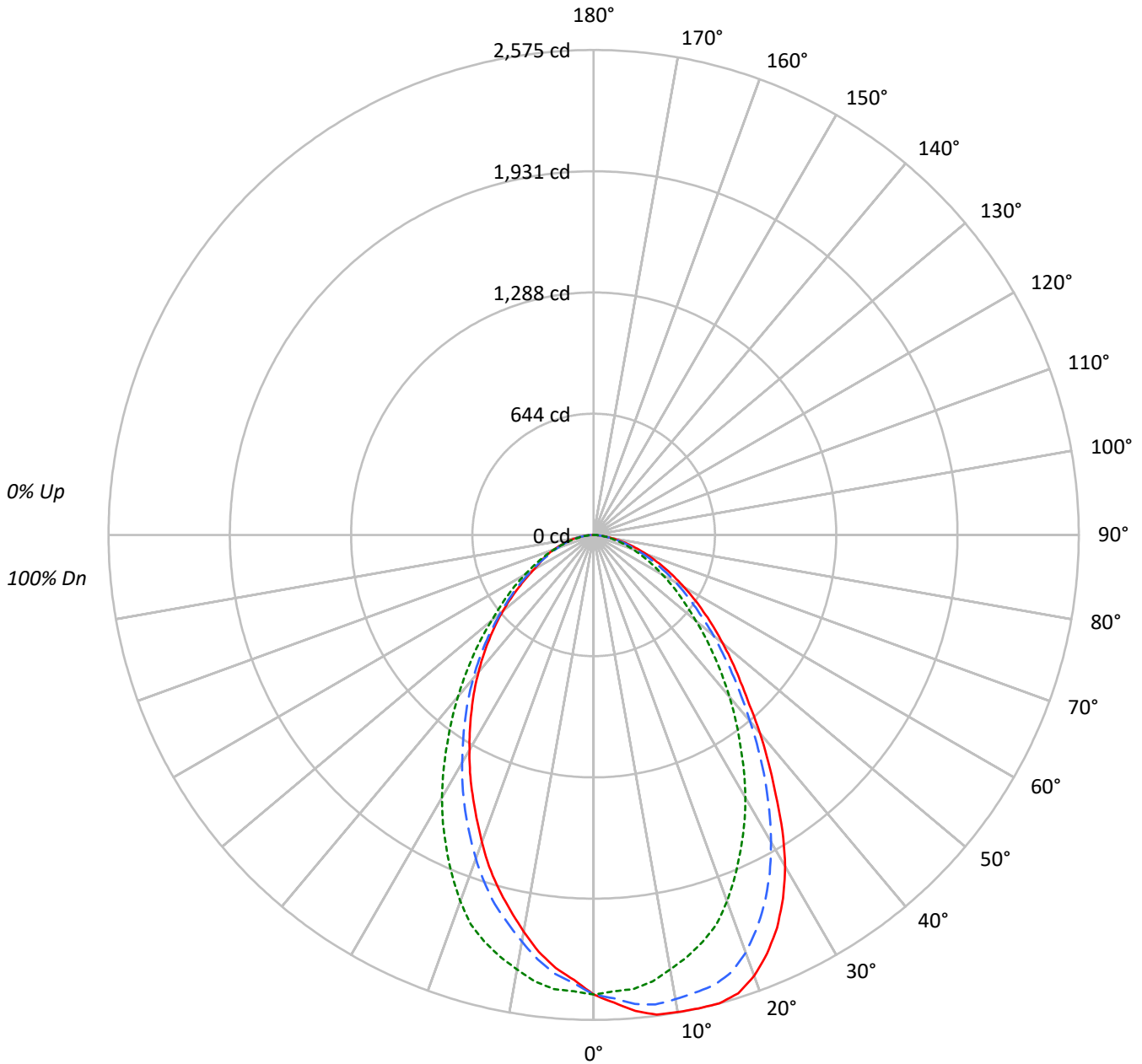
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47			47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35			35
10	59	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°	300976	300976	300976
5°	314222	299637	285769
10°	322164	293394	267869
15°	328819	285568	248549
20°	327078	271685	227608
25°	313336	251221	207058
30°	289469	229365	187676
35°	253738	204032	169866
40°	220947	180274	152998
45°	192299	157255	136706
50°	171321	135514	120623
55°	153092	119157	104319
60°	136692	104104	89944
65°	121472	91323	85457
70°	106641	78655	79737
75°	90310	67006	73868
80°	69327	57039	67267
85°	40617	44721	56892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.7	5.2
10°-20°	630.9	14.5
20°-30°	862.0	19.8
30°-40°	865.5	19.9
40°-50°	716.0	16.4
50°-60°	518.9	11.9
60°-70°	328.7	7.5
70°-80°	166.1	3.8
80°-90°	40.7	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°	1721.6	39.5
0°-40°	2587.2	59.4
0°-60°	3822.1	87.7
0°-90°	4357.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4357.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2440	2440	2440	2440	2440	
5°	2538	2500	2420	2340	2308	243
15°	2575	2474	2236	2030	1946	724
25°	2302	2150	1846	1613	1521	1052
35°	1685	1585	1355	1188	1128	1056
45°	1102	1039	902	812	784	857
55°	712	649	554	505	485	640
65°	416	370	313	281	293	414
75°	190	164	141	146	155	202
85°	29	29	32	37	40	40
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°	2440.1	2440.1	2440.1	2440.1	2440.1	2440.1	2440.1	2440.1	2440.1
2.5°	2486.0	2477.5	2463.1	2445.9	2425.7	2402.8	2382.8	2371.3	2365.5
5°	2537.8	2526.3	2500.4	2463.1	2420.0	2377.0	2339.7	2316.7	2308.0
7.5°	2569.3	2552.1	2514.7	2457.3	2391.3	2328.2	2273.6	2242.0	2233.5
10°	2572.2	2552.1	2503.2	2425.7	2342.5	2259.2	2193.2	2147.3	2138.7
12.5°	2575.0	2549.2	2489.0	2397.0	2293.8	2190.4	2109.9	2055.5	2041.1
15°	2575.0	2549.2	2474.5	2365.5	2236.3	2118.6	2029.6	1966.5	1946.4
17.5°	2552.1	2523.4	2434.4	2308.0	2167.4	2035.4	1932.0	1865.9	1845.9
20°	2491.8	2460.3	2359.7	2222.0	2069.8	1932.0	1828.7	1759.7	1734.0
22.5°	2405.7	2368.4	2262.2	2112.9	1960.8	1820.0	1719.6	1647.8	1624.8
25°	2302.3	2265.0	2150.2	2003.7	1845.9	1713.8	1613.4	1547.3	1521.4
27.5°	2176.0	2135.8	2023.9	1877.5	1731.0	1599.0	1507.2	1446.9	1421.0
30°	2032.4	1989.4	1883.2	1742.5	1610.4	1484.2	1395.2	1346.4	1317.7
32.5°	1865.9	1828.7	1734.0	1607.6	1484.2	1363.6	1288.9	1245.9	1223.0
35°	1685.1	1665.0	1584.7	1475.6	1355.0	1254.5	1188.4	1148.3	1128.1
37.5°	1524.4	1504.2	1435.4	1343.5	1237.3	1145.5	1090.9	1056.4	1039.2
40°	1372.2	1355.0	1288.9	1211.4	1119.6	1039.2	993.3	967.4	950.2
42.5°	1223.0	1214.3	1159.8	1088.0	1007.7	938.7	901.5	881.3	866.9
45°	1102.4	1090.9	1039.2	970.3	901.5	844.0	812.4	798.1	783.7
47.5°	996.2	981.8	927.2	866.9	803.8	752.2	723.4	709.1	703.4
50°	892.8	878.4	829.7	769.4	706.2	668.9	645.9	631.6	628.6
52.5°	800.9	786.6	732.0	674.7	625.8	594.2	574.2	559.8	554.1
55°	711.9	694.7	648.8	594.2	554.1	525.4	505.2	491.0	485.1
57.5°	631.6	614.4	574.2	522.4	485.1	459.3	442.1	427.7	422.0
60°	554.1	539.7	502.4	453.6	422.0	399.0	381.8	370.3	364.6
62.5°	482.3	470.8	433.5	390.4	364.6	344.5	330.2	318.6	324.3
65°	416.2	404.8	370.3	333.0	312.9	292.8	281.4	281.4	292.8
67.5°	353.1	341.7	312.9	281.4	264.2	249.8	241.1	249.8	258.4
70°	295.7	284.2	258.4	232.5	218.1	206.7	206.7	215.3	221.1
72.5°	241.1	229.6	209.6	189.5	178.0	169.4	178.0	183.7	189.5
75°	189.5	180.9	163.7	149.3	140.6	137.8	146.4	152.1	155.0
77.5°	140.6	134.9	123.4	111.9	106.2	109.1	117.7	120.6	123.4
80°	97.6	94.7	86.2	80.3	80.3	83.2	89.0	91.9	94.7
82.5°	60.3	60.3	54.6	51.6	54.6	60.3	63.1	66.0	66.0
85°	28.7	31.6	28.7	28.7	31.6	37.4	37.4	40.2	40.2
87.5°	8.7	8.7	11.5	11.5	14.4	14.4	14.4	14.4	17.2
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)