

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: P580880

Luminaire Tested: **HC450D010-HM44560835-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580880
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560835-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4848.6 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

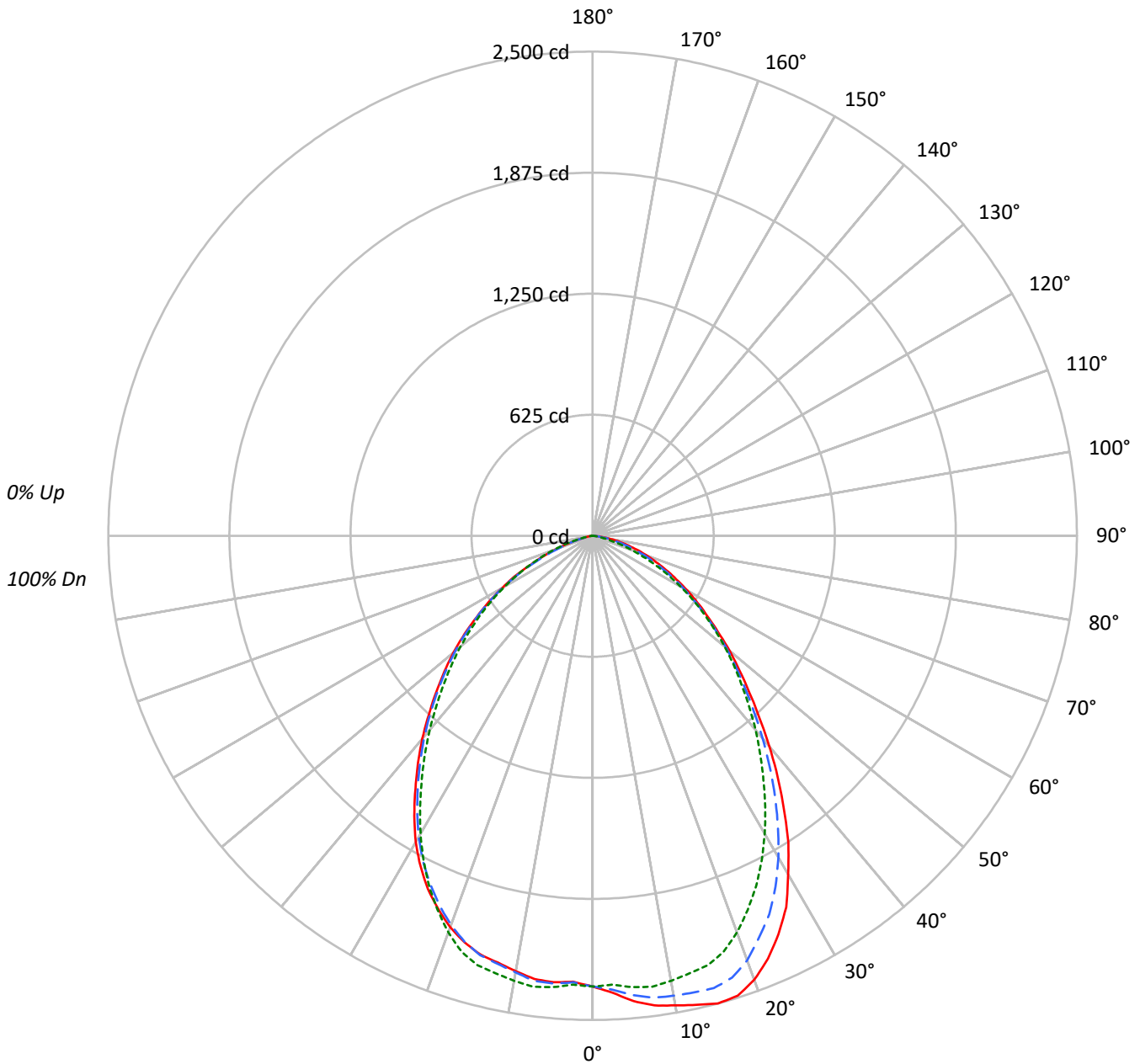
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76																			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41																			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	287001	287001	287001
5°	298609	289645	286537
10°	308362	292217	285905
15°	319204	293115	285875
20°	320265	286019	282304
25°	308953	271731	273868
30°	287504	253022	260200
35°	258978	231512	240050
40°	228337	210609	220238
45°	199643	189788	199102
50°	176771	170745	179803
55°	155522	150791	156876
60°	138838	128773	132646
65°	122056	104603	102764
70°	106605	77105	70288
75°	88404	46466	37458
80°	66983	17829	11152
85°	31135	4387	4387



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.4	4.6
10°-20°	654.9	13.5
20°-30°	948.5	19.6
30°-40°	1000.7	20.6
40°-50°	866.0	17.9
50°-60°	641.6	13.2
60°-70°	369.8	7.6
70°-80°	129.1	2.7
80°-90°	13.6	0.3
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°	1827.8	37.7
0°-40°	2828.5	58.3
0°-60°	4336.1	89.4
0°-90°	4848.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4848.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2327	2327	2327	2327	2327	
5°	2412	2380	2339	2320	2314	232
15°	2500	2418	2295	2242	2239	703
25°	2270	2157	1997	1984	2012	1039
35°	1720	1641	1538	1572	1594	1074
45°	1144	1113	1088	1129	1141	888
55°	723	708	701	726	730	652
65°	418	393	358	340	352	418
75°	186	157	98	79	79	200
85°	22	13	3	3	3	34
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°	2326.8	2326.8	2326.8	2326.8	2326.8	2326.8	2326.8	2326.8	2326.8
2.5°	2361.3	2355.0	2345.6	2333.1	2320.5	2311.1	2307.9	2304.8	2304.8
5°	2411.7	2399.1	2380.3	2355.0	2339.3	2329.9	2320.5	2314.2	2314.2
7.5°	2446.2	2433.6	2405.4	2370.8	2348.8	2329.9	2317.4	2307.9	2307.9
10°	2462.0	2446.2	2411.7	2367.7	2333.1	2307.9	2289.1	2282.7	2282.7
12.5°	2480.9	2462.0	2414.8	2358.2	2314.2	2282.7	2263.9	2257.6	2257.6
15°	2499.7	2477.7	2417.9	2351.9	2295.4	2257.6	2241.9	2238.7	2238.7
17.5°	2490.3	2462.0	2392.8	2314.2	2251.3	2213.6	2197.8	2197.8	2201.0
20°	2439.9	2411.7	2333.1	2245.0	2179.0	2150.7	2138.2	2144.4	2150.7
22.5°	2364.6	2329.9	2245.0	2160.1	2090.9	2065.8	2065.8	2075.2	2084.7
25°	2270.1	2238.7	2157.0	2062.7	1996.6	1977.8	1984.1	1999.8	2012.3
27.5°	2163.3	2128.7	2043.7	1955.7	1889.8	1880.2	1896.0	1918.0	1924.3
30°	2018.6	1990.4	1918.0	1833.1	1776.5	1773.4	1795.4	1811.2	1826.9
32.5°	1880.2	1848.8	1779.7	1697.9	1657.1	1660.2	1685.3	1704.2	1713.6
35°	1719.9	1691.6	1641.3	1575.3	1537.5	1543.8	1572.2	1591.0	1594.2
37.5°	1569.0	1550.1	1499.9	1449.5	1421.2	1433.8	1458.9	1480.9	1480.9
40°	1418.1	1402.3	1364.6	1323.8	1308.0	1323.8	1348.9	1367.8	1367.8
42.5°	1273.5	1264.0	1232.5	1204.3	1194.8	1216.8	1238.8	1254.6	1251.5
45°	1144.5	1135.1	1113.1	1091.1	1088.0	1110.0	1128.8	1138.2	1141.4
47.5°	1028.2	1021.9	1003.1	987.3	987.3	1009.4	1025.1	1034.5	1037.6
50°	921.2	914.9	899.2	886.7	889.8	911.8	924.5	933.9	937.0
52.5°	814.4	811.2	798.7	783.0	792.4	808.1	823.8	830.1	833.2
55°	723.2	723.2	707.5	694.9	701.2	716.9	726.3	729.5	729.5
57.5°	641.4	638.3	619.5	606.9	610.0	625.7	632.0	635.2	635.2
60°	562.8	559.7	540.8	522.0	522.0	531.4	534.6	537.7	537.7
62.5°	487.4	484.2	462.2	446.5	440.3	437.0	437.0	443.4	456.0
65°	418.2	415.0	393.0	367.9	358.4	349.0	339.6	345.8	352.1
67.5°	355.3	349.0	327.0	305.0	282.9	267.2	251.5	261.0	273.5
70°	295.6	289.3	264.1	239.0	213.8	188.6	176.1	188.6	194.9
72.5°	239.0	232.7	207.6	182.3	150.9	125.8	122.7	125.8	129.0
75°	185.5	182.3	157.2	129.0	97.5	78.6	78.6	78.6	78.6
77.5°	138.4	132.1	106.9	81.7	56.6	44.1	40.8	40.8	40.8
80°	94.3	88.0	66.0	47.2	25.1	18.8	18.8	15.7	15.7
82.5°	53.5	50.3	34.5	18.8	9.4	6.3	6.3	6.3	6.3
85°	22.0	18.8	12.6	6.3	3.1	3.1	3.1	3.1	3.1
87.5°	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0
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)