

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: P581225

Luminaire Tested: **HC455D010-HM44560930-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581225
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-HM44560930-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4219.3 lumens
Efficiency: N/A
Efficacy: 81.1 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

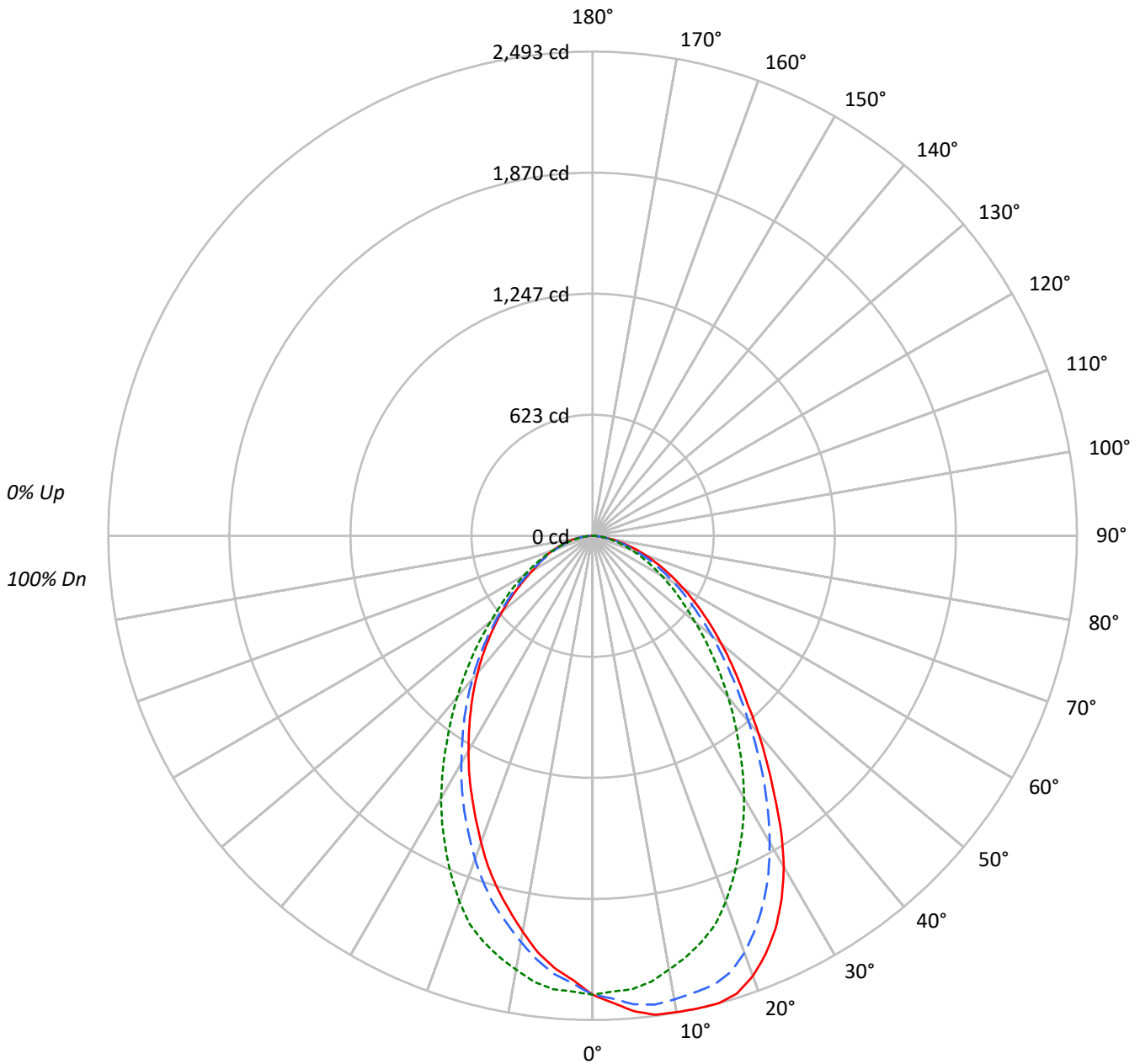
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
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°	291429	291429	291429
5°	304243	290140	276706
10°	311931	284076	259364
15°	318386	276502	240657
20°	316695	263062	220362
25°	303401	243246	200498
30°	280297	222101	181723
35°	245682	197557	164491
40°	213926	174542	148135
45°	186194	152249	132363
50°	165871	131216	116804
55°	148253	115372	101029
60°	132350	100798	87082
65°	117649	88434	82742
70°	103251	76203	77177
75°	87451	64909	71533
80°	67125	55334	65136
85°	39343	43306	55053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.5	5.2
10°-20°	610.9	14.5
20°-30°	834.6	19.8
30°-40°	838.1	19.9
40°-50°	693.3	16.4
50°-60°	502.4	11.9
60°-70°	318.2	7.5
70°-80°	160.9	3.8
80°-90°	39.4	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°	1667.0	39.5
0°-40°	2505.0	59.4
0°-60°	3700.8	87.7
0°-90°	4219.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4219.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2363	2363	2363	2363	2363	
5°	2457	2421	2343	2265	2235	235
15°	2493	2396	2165	1965	1885	701
25°	2229	2082	1787	1562	1473	1019
35°	1632	1534	1312	1151	1092	1023
45°	1067	1006	873	787	759	830
55°	689	628	536	489	470	620
65°	403	358	303	272	284	401
75°	184	158	136	142	150	196
85°	28	28	31	36	39	39
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°	2362.7	2362.7	2362.7	2362.7	2362.7	2362.7	2362.7	2362.7	2362.7
2.5°	2407.2	2398.8	2384.9	2368.2	2348.8	2326.5	2307.0	2296.0	2290.4
5°	2457.2	2446.1	2421.0	2384.9	2343.3	2301.5	2265.4	2243.1	2234.8
7.5°	2487.7	2471.1	2435.0	2379.4	2315.4	2254.3	2201.4	2170.9	2162.6
10°	2490.5	2471.1	2423.8	2348.8	2268.1	2187.6	2123.7	2079.1	2070.8
12.5°	2493.3	2468.2	2410.0	2321.0	2220.9	2120.8	2043.0	1990.2	1976.3
15°	2493.3	2468.2	2396.0	2290.4	2165.3	2051.3	1965.2	1904.1	1884.6
17.5°	2471.1	2443.3	2357.1	2234.8	2098.6	1970.8	1870.6	1806.8	1787.3
20°	2412.7	2382.1	2284.9	2151.5	2004.1	1870.6	1770.6	1703.9	1678.8
22.5°	2329.3	2293.2	2190.4	2045.8	1898.4	1762.3	1665.0	1595.5	1573.3
25°	2229.3	2193.1	2081.9	1940.2	1787.3	1659.4	1562.2	1498.2	1473.2
27.5°	2106.9	2068.1	1959.6	1817.9	1676.1	1548.2	1459.4	1401.0	1375.9
30°	1968.0	1926.2	1823.4	1687.3	1559.4	1437.1	1350.9	1303.6	1275.9
32.5°	1806.8	1770.6	1678.8	1556.6	1437.1	1320.3	1248.1	1206.3	1184.1
35°	1631.6	1612.1	1534.4	1428.8	1312.0	1214.7	1150.8	1111.8	1092.4
37.5°	1476.0	1456.5	1389.8	1300.8	1198.0	1109.0	1056.3	1022.8	1006.2
40°	1328.6	1312.0	1248.1	1173.0	1084.0	1006.2	961.8	936.7	920.0
42.5°	1184.1	1175.7	1123.0	1053.4	975.6	908.9	872.8	853.3	839.5
45°	1067.4	1056.3	1006.2	939.5	872.8	817.2	786.6	772.8	758.8
47.5°	964.6	950.6	897.9	839.5	778.3	728.2	700.4	686.6	681.0
50°	864.4	850.6	803.4	745.0	683.8	647.7	625.4	611.6	608.7
52.5°	775.5	761.6	708.8	653.2	605.9	575.3	556.0	542.0	536.5
55°	689.4	672.6	628.2	575.3	536.5	508.7	489.3	475.3	469.8
57.5°	611.6	594.8	556.0	505.9	469.8	444.7	428.1	414.1	408.6
60°	536.5	522.6	486.4	439.2	408.6	386.3	369.7	358.5	353.0
62.5°	467.0	455.8	419.7	378.0	353.0	333.6	319.6	308.6	314.1
65°	403.1	392.0	358.5	322.4	303.0	283.5	272.4	272.4	283.5
67.5°	341.9	330.8	303.0	272.4	255.7	241.9	233.4	241.9	250.2
70°	286.3	275.2	250.2	225.1	211.3	200.1	200.1	208.5	214.0
72.5°	233.4	222.4	203.0	183.5	172.4	164.0	172.4	177.9	183.5
75°	183.5	175.2	158.4	144.6	136.2	133.4	141.8	147.4	150.1
77.5°	136.2	130.6	119.5	108.4	102.8	105.6	114.0	116.8	119.5
80°	94.5	91.7	83.4	77.9	77.9	80.7	86.2	89.0	91.7
82.5°	58.4	58.4	52.8	50.1	52.8	58.4	61.2	63.9	63.9
85°	27.8	30.6	27.8	27.8	30.6	36.1	36.1	38.9	38.9
87.5°	8.3	8.3	11.1	11.1	14.0	14.0	14.0	14.0	16.7
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)