

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: P580844

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580844
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-HM44560827-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4343.2 lumens
Efficiency: N/A
Efficacy: 90.5 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

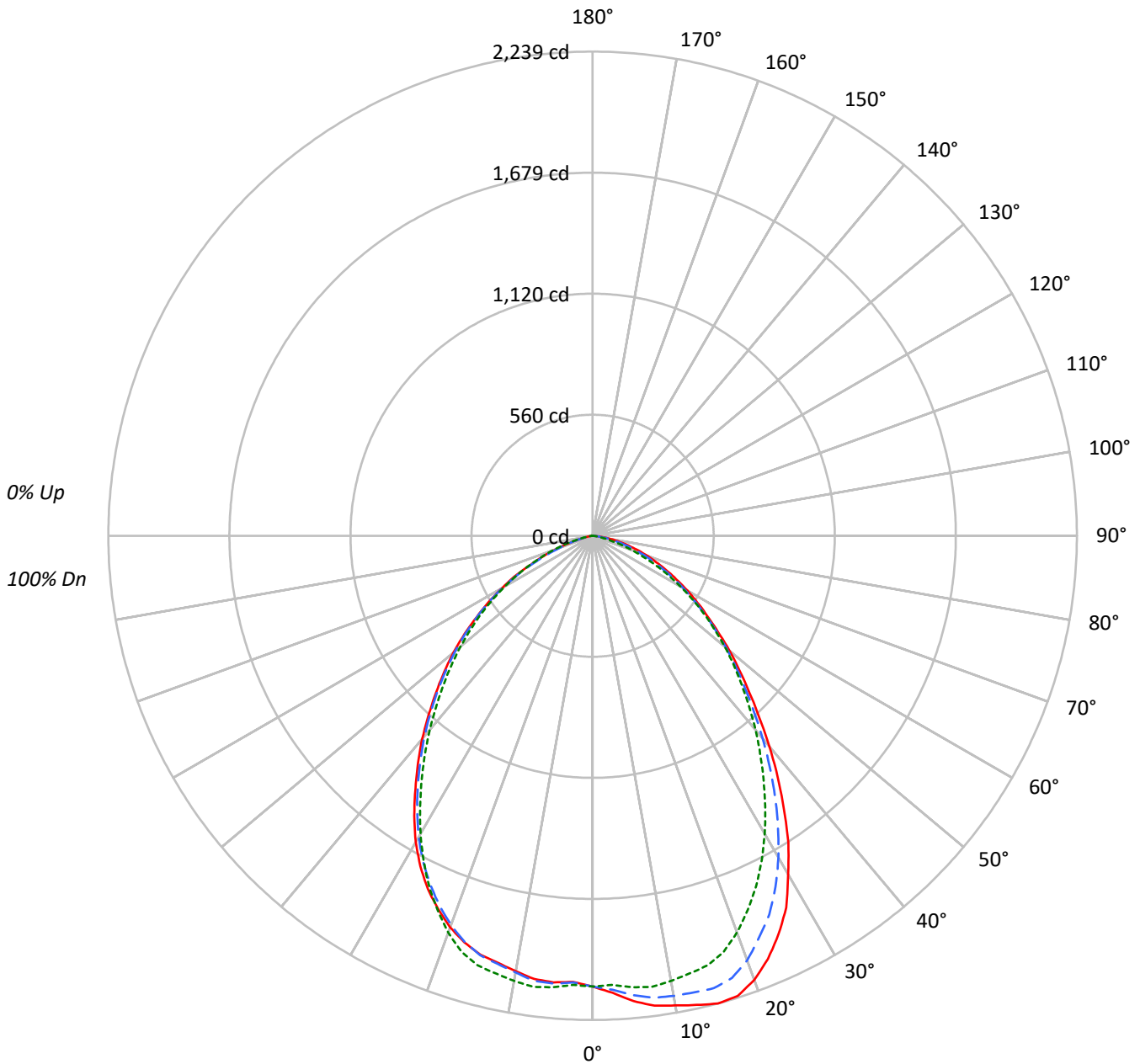
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67			67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52			52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41			41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	257089	257089	257089
5°	267481	259470	256672
10°	276223	261757	256121
15°	285926	262545	256070
20°	286899	256210	252876
25°	276767	243409	245328
30°	257537	226645	233068
35°	231979	207390	215024
40°	204539	188647	197277
45°	178833	169989	178344
50°	158368	152938	161055
55°	139307	135071	140533
60°	124357	115353	118831
65°	109331	93716	92082
70°	95497	69062	62967
75°	79206	41605	33551
80°	60022	16053	10016
85°	27880	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.0	4.6
10°-20°	586.7	13.5
20°-30°	849.6	19.6
30°-40°	896.4	20.6
40°-50°	775.8	17.9
50°-60°	574.7	13.2
60°-70°	331.3	7.6
70°-80°	115.7	2.7
80°-90°	12.2	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°	1637.3	37.7
0°-40°	2533.7	58.3
0°-60°	3884.1	89.4
0°-90°	4343.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4343.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2084	2084	2084	2084	2084	
5°	2160	2132	2096	2079	2073	207
15°	2239	2166	2056	2008	2005	630
25°	2034	1932	1788	1777	1803	931
35°	1541	1470	1377	1408	1428	962
45°	1025	997	974	1011	1022	796
55°	648	634	628	651	654	584
65°	375	352	321	304	316	374
75°	166	141	87	70	70	179
85°	20	11	3	3	3	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°	2084.3	2084.3	2084.3	2084.3	2084.3	2084.3	2084.3	2084.3	2084.3
2.5°	2115.3	2109.6	2101.2	2089.9	2078.6	2070.2	2067.3	2064.6	2064.6
5°	2160.3	2149.0	2132.1	2109.6	2095.6	2087.0	2078.6	2073.0	2073.0
7.5°	2191.3	2180.0	2154.7	2123.7	2104.0	2087.0	2075.8	2067.3	2067.3
10°	2205.4	2191.3	2160.3	2120.9	2089.9	2067.3	2050.5	2044.9	2044.9
12.5°	2222.3	2205.4	2163.1	2112.4	2073.0	2044.9	2027.9	2022.3	2022.3
15°	2239.1	2219.4	2166.0	2106.7	2056.0	2022.3	2008.2	2005.3	2005.3
17.5°	2230.7	2205.4	2143.4	2073.0	2016.6	1982.9	1968.8	1968.8	1971.6
20°	2185.7	2160.3	2089.9	2011.0	1951.9	1926.5	1915.2	1920.9	1926.5
22.5°	2118.0	2087.0	2011.0	1934.9	1873.0	1850.5	1850.5	1858.9	1867.4
25°	2033.6	2005.3	1932.2	1847.7	1788.5	1771.6	1777.3	1791.3	1802.6
27.5°	1937.8	1906.8	1830.8	1751.9	1692.7	1684.3	1698.4	1718.1	1723.7
30°	1808.2	1782.8	1718.1	1642.0	1591.3	1588.5	1608.2	1622.3	1636.4
32.5°	1684.3	1656.2	1594.2	1520.9	1484.3	1487.1	1509.6	1526.6	1535.0
35°	1540.6	1515.3	1470.2	1411.1	1377.3	1383.0	1408.3	1425.2	1428.0
37.5°	1405.4	1388.5	1343.5	1298.4	1273.0	1284.3	1306.9	1326.6	1326.6
40°	1270.3	1256.2	1222.3	1185.8	1171.6	1185.8	1208.3	1225.2	1225.2
42.5°	1140.7	1132.2	1104.1	1078.8	1070.2	1090.0	1109.8	1123.8	1120.9
45°	1025.2	1016.8	997.1	977.4	974.5	994.2	1011.1	1019.5	1022.4
47.5°	921.0	915.4	898.4	884.4	884.4	904.1	918.1	926.7	929.4
50°	825.3	819.6	805.6	794.3	797.0	816.7	828.0	836.6	839.3
52.5°	729.5	726.6	715.5	701.3	709.8	723.9	737.9	743.6	746.3
55°	647.8	647.8	633.8	622.5	628.1	642.2	650.6	653.5	653.5
57.5°	574.5	571.8	554.8	543.6	546.4	560.5	566.1	568.9	568.9
60°	504.1	501.4	484.4	467.6	467.6	476.0	478.8	481.7	481.7
62.5°	436.6	433.7	414.0	400.0	394.3	391.5	391.5	397.1	408.4
65°	374.6	371.7	352.0	329.6	321.1	312.6	304.2	309.8	315.5
67.5°	318.3	312.6	292.9	273.2	253.5	239.4	225.3	233.8	245.1
70°	264.8	259.1	236.6	214.1	191.5	169.0	157.7	169.0	174.6
72.5°	214.1	208.4	185.9	163.4	135.2	112.7	109.8	112.7	115.5
75°	166.2	163.4	140.8	115.5	87.3	70.4	70.4	70.4	70.4
77.5°	123.9	118.3	95.8	73.3	50.7	39.4	36.6	36.6	36.6
80°	84.5	78.8	59.1	42.3	22.6	16.9	16.9	14.1	14.1
82.5°	47.9	45.1	31.0	16.9	8.4	5.6	5.6	5.6	5.6
85°	19.7	16.9	11.3	5.6	2.8	2.8	2.8	2.8	2.8
87.5°	2.8	2.8	2.8	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)