

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: P581222

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581222
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: HC455D010-HM44560930-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4286.0 lumens
Efficiency: N/A
Efficacy: 82.4 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

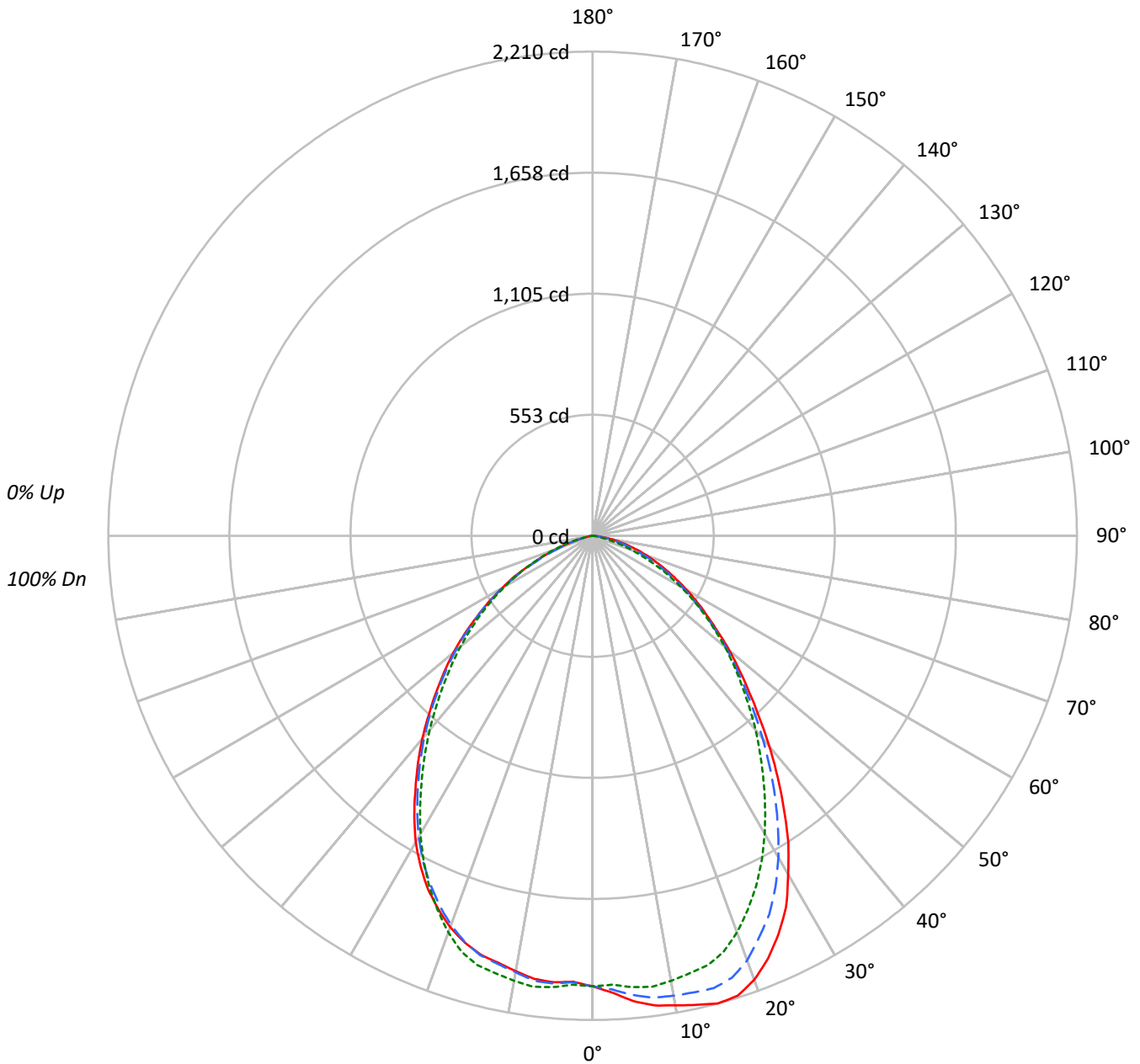
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	253685	253685	253685
5°	263953	256041	253280
10°	272578	258312	252726
15°	282159	259084	252699
20°	283105	252823	249542
25°	273106	240197	242089
30°	254147	223668	229992
35°	228923	204649	212193
40°	201834	186183	194669
45°	176478	167739	175990
50°	156277	150942	158925
55°	137458	133286	138662
60°	122729	113823	117252
65°	107901	92461	90856
70°	94199	68161	62174
75°	78158	41080	33122
80°	59241	15840	9944
85°	27597	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.4	4.6
10°-20°	578.9	13.5
20°-30°	838.4	19.6
30°-40°	884.5	20.6
40°-50°	765.5	17.9
50°-60°	567.1	13.2
60°-70°	326.9	7.6
70°-80°	114.2	2.7
80°-90°	12.0	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°	1615.7	37.7
0°-40°	2500.3	58.3
0°-60°	3832.9	89.4
0°-90°	4286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4286.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2057	2057	2057	2057	2057	
5°	2132	2104	2068	2051	2046	205
15°	2210	2137	2029	1982	1979	621
25°	2007	1907	1765	1754	1779	918
35°	1520	1451	1359	1390	1409	950
45°	1012	984	962	998	1009	785
55°	639	625	620	642	645	576
65°	370	347	317	300	311	369
75°	164	139	86	70	70	176
85°	20	11	3	3	3	30
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°	2056.7	2056.7	2056.7	2056.7	2056.7	2056.7	2056.7	2056.7	2056.7
2.5°	2087.3	2081.8	2073.4	2062.4	2051.2	2042.9	2040.1	2037.3	2037.3
5°	2131.8	2120.6	2104.0	2081.8	2067.9	2059.5	2051.2	2045.6	2045.6
7.5°	2162.4	2151.2	2126.2	2095.6	2076.2	2059.5	2048.4	2040.1	2040.1
10°	2176.3	2162.4	2131.8	2092.8	2062.4	2040.1	2023.4	2017.8	2017.8
12.5°	2193.0	2176.3	2134.6	2084.5	2045.6	2017.8	2001.2	1995.6	1995.6
15°	2209.6	2190.2	2137.4	2079.0	2028.9	1995.6	1981.7	1978.9	1978.9
17.5°	2201.3	2176.3	2115.1	2045.6	1990.0	1956.7	1942.8	1942.8	1945.6
20°	2156.8	2131.8	2062.4	1984.5	1926.1	1901.1	1890.0	1895.5	1901.1
22.5°	2090.1	2059.5	1984.5	1909.5	1848.3	1826.1	1826.1	1834.4	1842.8
25°	2006.7	1978.9	1906.6	1823.3	1764.9	1748.2	1753.8	1767.7	1778.8
27.5°	1912.2	1881.7	1806.6	1728.8	1670.4	1662.1	1676.0	1695.4	1701.0
30°	1784.4	1759.4	1695.4	1620.3	1570.4	1567.6	1587.0	1600.9	1614.8
32.5°	1662.1	1634.3	1573.1	1500.9	1464.8	1467.6	1489.7	1506.4	1514.8
35°	1520.3	1495.4	1450.8	1392.5	1359.1	1364.6	1389.7	1406.4	1409.2
37.5°	1386.9	1370.2	1325.8	1281.3	1256.3	1267.4	1289.6	1309.0	1309.0
40°	1253.5	1239.6	1206.2	1170.1	1156.3	1170.1	1192.4	1209.0	1209.0
42.5°	1125.7	1117.4	1089.6	1064.5	1056.1	1075.6	1095.1	1109.0	1106.2
45°	1011.7	1003.4	983.9	964.5	961.6	981.1	997.8	1006.1	1008.9
47.5°	908.9	903.3	886.6	872.8	872.8	892.2	906.1	914.4	917.2
50°	814.4	808.8	794.9	783.8	786.6	806.1	817.1	825.5	828.2
52.5°	719.9	717.1	705.9	692.1	700.4	714.3	728.2	733.7	736.5
55°	639.2	639.2	625.4	614.2	619.8	633.7	642.0	644.8	644.8
57.5°	567.0	564.2	547.5	536.4	539.2	553.1	558.7	561.5	561.5
60°	497.5	494.8	478.0	461.4	461.4	469.7	472.5	475.3	475.3
62.5°	430.8	428.1	408.6	394.7	389.1	386.3	386.3	391.8	403.0
65°	369.7	366.9	347.4	325.2	316.8	308.5	300.2	305.8	311.3
67.5°	314.1	308.5	289.0	269.6	250.2	236.2	222.3	230.7	241.8
70°	261.2	255.7	233.4	211.3	189.0	166.7	155.7	166.7	172.4
72.5°	211.3	205.6	183.5	161.2	133.4	111.2	108.4	111.2	114.0
75°	164.0	161.2	138.9	114.0	86.2	69.5	69.5	69.5	69.5
77.5°	122.3	116.8	94.5	72.2	50.1	38.9	36.1	36.1	36.1
80°	83.4	77.9	58.4	41.7	22.3	16.7	16.7	14.0	14.0
82.5°	47.2	44.4	30.6	16.7	8.3	5.5	5.5	5.5	5.5
85°	19.5	16.7	11.1	5.5	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)