

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: P581402

Luminaire Tested: **HC460D010-HM44560940-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581402
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: HC460D010-HM44560940-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4605.2 lumens
Efficiency: N/A
Efficacy: 83.7 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

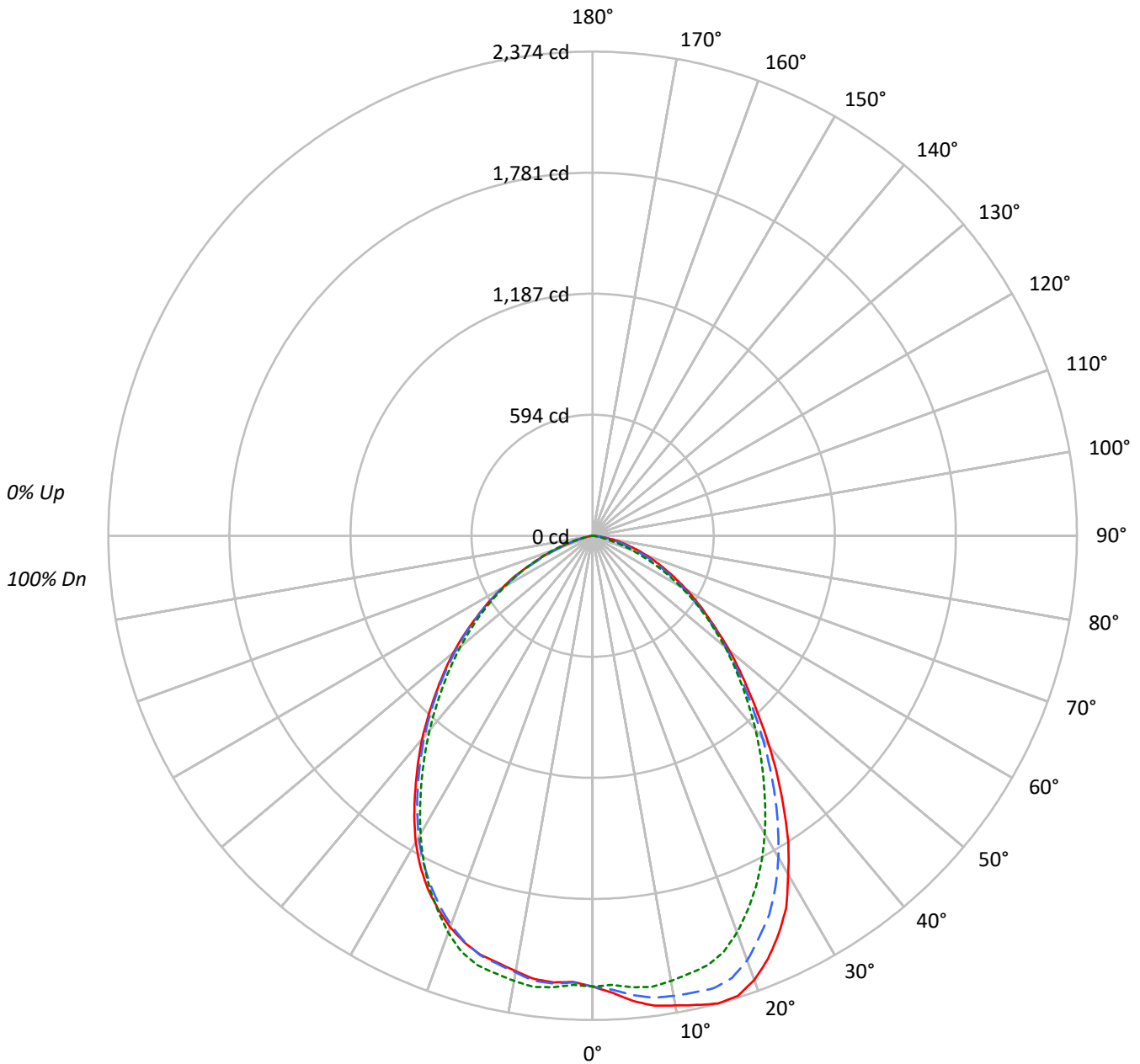
Input Watts (W): 55
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	272594	272594	272594
5°	283615	275109	272149
10°	292868	277551	271551
15°	303178	278392	271534
20°	304199	271672	268128
25°	293452	258094	260122
30°	273076	240332	247126
35°	245983	219903	227989
40°	216873	200047	209176
45°	189631	180263	189107
50°	167905	162187	170784
55°	147694	143221	148984
60°	131881	122310	125961
65°	115927	99349	97627
70°	101267	73210	66754
75°	83972	44130	35600
80°	63645	16977	10584
85°	29578	4104	4104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.1	4.6
10°-20°	622.1	13.5
20°-30°	900.9	19.6
30°-40°	950.4	20.6
40°-50°	822.6	17.9
50°-60°	609.4	13.2
60°-70°	351.2	7.6
70°-80°	122.7	2.7
80°-90°	12.9	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°	1736.1	37.7
0°-40°	2686.5	58.3
0°-60°	4118.4	89.4
0°-90°	4605.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4605.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2210	2210	2210	2210	2210	
5°	2291	2261	2222	2204	2198	220
15°	2374	2297	2180	2129	2126	668
25°	2156	2049	1896	1884	1911	987
35°	1634	1559	1460	1493	1514	1020
45°	1087	1057	1033	1072	1084	844
55°	687	672	666	690	693	619
65°	397	373	340	322	334	397
75°	176	149	93	75	75	190
85°	21	12	3	3	3	32
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°	2210.0	2210.0	2210.0	2210.0	2210.0	2210.0	2210.0	2210.0	2210.0
2.5°	2242.8	2236.8	2227.9	2216.0	2204.0	2195.1	2192.0	2189.1	2189.1
5°	2290.6	2278.7	2260.7	2236.8	2221.9	2212.9	2204.0	2198.0	2198.0
7.5°	2323.5	2311.5	2284.7	2251.8	2230.8	2212.9	2201.1	2192.0	2192.0
10°	2338.3	2323.5	2290.6	2248.8	2216.0	2192.0	2174.1	2168.1	2168.1
12.5°	2356.3	2338.3	2293.6	2239.9	2198.0	2168.1	2150.2	2144.2	2144.2
15°	2374.2	2353.3	2296.6	2233.9	2180.1	2144.2	2129.3	2126.4	2126.4
17.5°	2365.3	2338.3	2272.7	2198.0	2138.3	2102.5	2087.5	2087.5	2090.5
20°	2317.5	2290.6	2216.0	2132.4	2069.7	2042.7	2030.7	2036.7	2042.7
22.5°	2245.8	2212.9	2132.4	2051.7	1986.0	1962.0	1962.0	1971.1	1980.0
25°	2156.2	2126.4	2048.7	1959.1	1896.4	1878.5	1884.4	1899.3	1911.3
27.5°	2054.7	2021.8	1941.2	1857.6	1794.9	1785.8	1800.9	1821.7	1827.7
30°	1917.3	1890.4	1821.7	1741.1	1687.4	1684.3	1705.3	1720.2	1735.1
32.5°	1785.8	1756.1	1690.3	1612.7	1573.9	1576.8	1600.7	1618.7	1627.6
35°	1633.6	1606.7	1558.9	1496.2	1460.4	1466.4	1493.2	1511.2	1514.1
37.5°	1490.2	1472.3	1424.6	1376.7	1349.9	1361.8	1385.7	1406.6	1406.6
40°	1346.9	1331.9	1296.1	1257.3	1242.4	1257.3	1281.2	1299.1	1299.1
42.5°	1209.6	1200.5	1170.6	1143.8	1134.9	1155.7	1176.6	1191.6	1188.6
45°	1087.1	1078.1	1057.2	1036.3	1033.4	1054.2	1072.2	1081.1	1084.1
47.5°	976.6	970.6	952.7	937.7	937.7	958.7	973.6	982.5	985.5
50°	875.0	869.0	854.1	842.2	845.2	866.1	878.0	886.9	890.0
52.5°	773.5	770.5	758.6	743.6	752.6	767.5	782.5	788.5	791.4
55°	686.8	686.8	671.9	660.0	666.0	680.9	689.9	692.8	692.8
57.5°	609.2	606.3	588.4	576.4	579.3	594.3	600.3	603.3	603.3
60°	534.6	531.6	513.7	495.8	495.8	504.7	507.7	510.6	510.6
62.5°	462.9	459.9	439.0	424.1	418.1	415.1	415.1	421.1	433.0
65°	397.2	394.2	373.3	349.5	340.4	331.5	322.5	328.5	334.5
67.5°	337.5	331.5	310.5	289.7	268.8	253.8	238.9	247.8	259.8
70°	280.8	274.8	250.9	227.0	203.0	179.2	167.3	179.2	185.1
72.5°	227.0	221.0	197.1	173.3	143.4	119.5	116.5	119.5	122.5
75°	176.2	173.3	149.3	122.5	92.6	74.7	74.7	74.7	74.7
77.5°	131.4	125.4	101.5	77.6	53.8	41.8	38.8	38.8	38.8
80°	89.6	83.6	62.7	44.8	23.9	17.9	17.9	14.9	14.9
82.5°	50.8	47.8	32.8	17.9	8.9	6.0	6.0	6.0	6.0
85°	20.9	17.9	12.0	6.0	2.9	2.9	2.9	2.9	2.9
87.5°	2.9	2.9	2.9	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)