

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: P581241

Luminaire Tested: **HC455D010-HM44560935-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581241  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC455D010-HM44560935-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4438.1 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

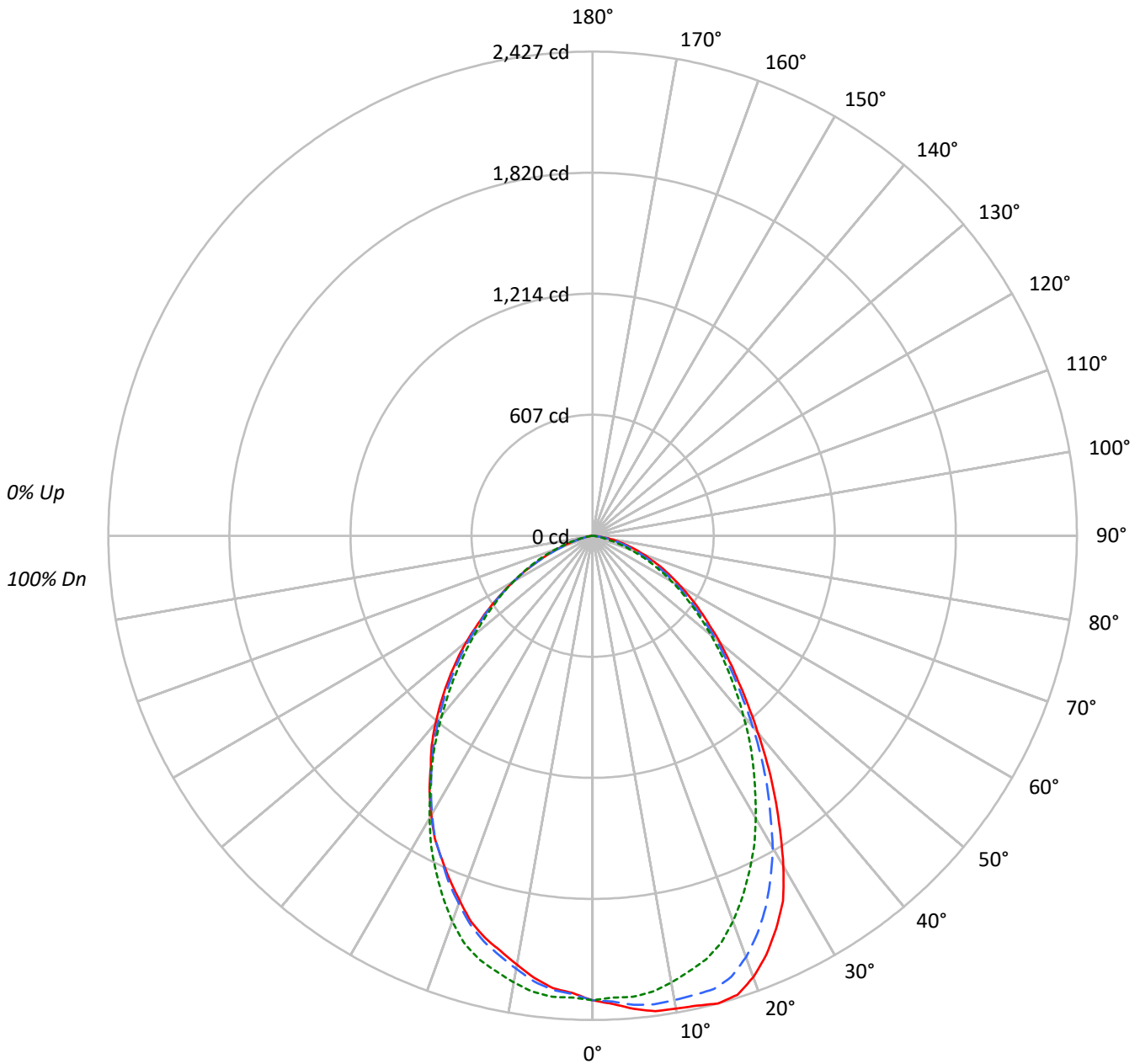
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	287210	287210	287210
5°	294746	287230	281857
10°	301423	284752	273518
15°	309895	280729	266312
20°	309056	269953	255527
25°	296038	252732	243287
30°	272307	232769	230305
35°	239553	211245	212991
40°	207244	189098	197020
45°	180124	168018	178100
50°	159865	148198	158196
55°	141823	130017	135608
60°	126306	112738	112738
65°	112308	93716	87792
70°	97012	70902	62607
75°	81351	46847	38602
80°	61585	22588	20528
85°	32833	8067	8067



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.5	5.0
10°-20°	625.2	14.1
20°-30°	881.6	19.9
30°-40°	910.8	20.5
40°-50°	772.1	17.4
50°-60°	561.8	12.7
60°-70°	328.2	7.4
70°-80°	122.0	2.7
80°-90°	16.0	0.4
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°	1727.3	38.9
0°-40°	2638.1	59.4
0°-60°	3972.0	89.5
0°-90°	4438.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4438.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2328	2328	2328	2328	2328	
5°	2380	2360	2320	2285	2276	228
15°	2427	2352	2198	2106	2086	682
25°	2175	2054	1857	1790	1788	995
35°	1591	1521	1403	1406	1414	994
45°	1033	1004	963	998	1021	804
55°	660	628	605	625	631	593
65°	385	353	321	301	301	382
75°	171	142	98	78	81	183
85°	23	14	6	6	6	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°	2328.5	2328.5	2328.5	2328.5	2328.5	2328.5	2328.5	2328.5	2328.5
2.5°	2348.8	2342.9	2337.2	2328.5	2316.9	2308.3	2299.5	2293.8	2293.8
5°	2380.5	2371.8	2360.2	2340.0	2319.8	2302.4	2285.1	2276.4	2276.4
7.5°	2403.7	2392.1	2368.9	2340.0	2305.4	2279.2	2253.3	2241.7	2235.9
10°	2406.6	2395.0	2363.2	2319.8	2273.5	2233.0	2204.1	2186.8	2183.8
12.5°	2412.3	2397.9	2357.4	2296.7	2235.9	2186.8	2154.9	2137.6	2131.8
15°	2426.8	2406.6	2351.6	2273.5	2198.4	2140.4	2105.8	2091.3	2085.5
17.5°	2412.3	2383.4	2316.9	2224.4	2140.4	2076.9	2042.1	2027.7	2027.7
20°	2354.5	2325.6	2247.5	2146.3	2056.6	1995.9	1961.1	1952.4	1946.7
22.5°	2273.5	2241.7	2157.9	2050.8	1961.1	1906.2	1883.0	1871.4	1868.5
25°	2175.2	2143.4	2053.7	1943.8	1857.0	1810.7	1790.4	1790.4	1787.6
27.5°	2065.3	2024.8	1932.2	1836.8	1752.9	1718.1	1709.4	1709.4	1712.4
30°	1911.9	1883.0	1805.0	1712.4	1634.3	1611.1	1611.1	1617.0	1617.0
32.5°	1747.1	1726.9	1657.5	1576.5	1515.7	1501.2	1507.0	1518.5	1521.4
35°	1590.9	1567.7	1521.4	1449.1	1402.9	1397.1	1405.8	1414.5	1414.5
37.5°	1437.5	1414.5	1382.6	1324.8	1290.0	1293.0	1304.6	1316.1	1324.8
40°	1287.1	1269.8	1246.7	1200.4	1174.4	1186.0	1200.4	1212.0	1223.6
42.5°	1154.1	1136.8	1119.4	1084.7	1067.3	1081.8	1099.1	1110.7	1122.3
45°	1032.6	1021.0	1003.7	974.8	963.2	977.6	997.9	1009.5	1021.0
47.5°	928.5	922.7	899.6	873.6	867.7	882.2	899.6	914.1	922.7
50°	833.1	824.4	804.2	778.1	772.3	795.5	807.0	815.7	824.4
52.5°	740.5	731.8	708.6	685.6	685.6	702.9	711.6	714.5	723.2
55°	659.5	650.8	627.6	610.3	604.6	619.0	624.8	624.8	630.6
57.5°	584.3	575.7	552.5	532.2	529.3	538.0	538.0	538.0	540.9
60°	512.0	503.3	480.2	462.8	457.0	459.9	457.0	454.2	457.0
62.5°	445.5	436.7	413.7	393.4	387.6	387.6	378.9	376.0	378.9
65°	384.8	370.2	352.9	332.7	321.1	312.4	300.8	300.8	300.8
67.5°	324.0	312.4	292.2	271.9	257.4	243.0	225.6	231.4	234.3
70°	269.0	260.3	237.2	216.9	196.6	179.3	164.9	170.7	173.6
72.5°	219.8	208.2	188.0	164.9	147.5	124.4	115.6	121.5	121.5
75°	170.7	159.1	141.8	118.6	98.3	78.1	78.1	81.0	81.0
77.5°	127.2	115.6	98.3	78.1	60.8	46.2	49.2	49.2	49.2
80°	86.7	78.1	63.7	46.2	31.8	26.0	26.0	26.0	28.9
82.5°	49.2	43.4	34.8	23.2	14.5	14.5	14.5	14.5	14.5
85°	23.2	17.3	14.5	8.7	5.7	5.7	5.7	5.7	5.7
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)