

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: P580812

Luminaire Tested: **HC445D010-HM44560935-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580812  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC445D010-HM44560935-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3947.6 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

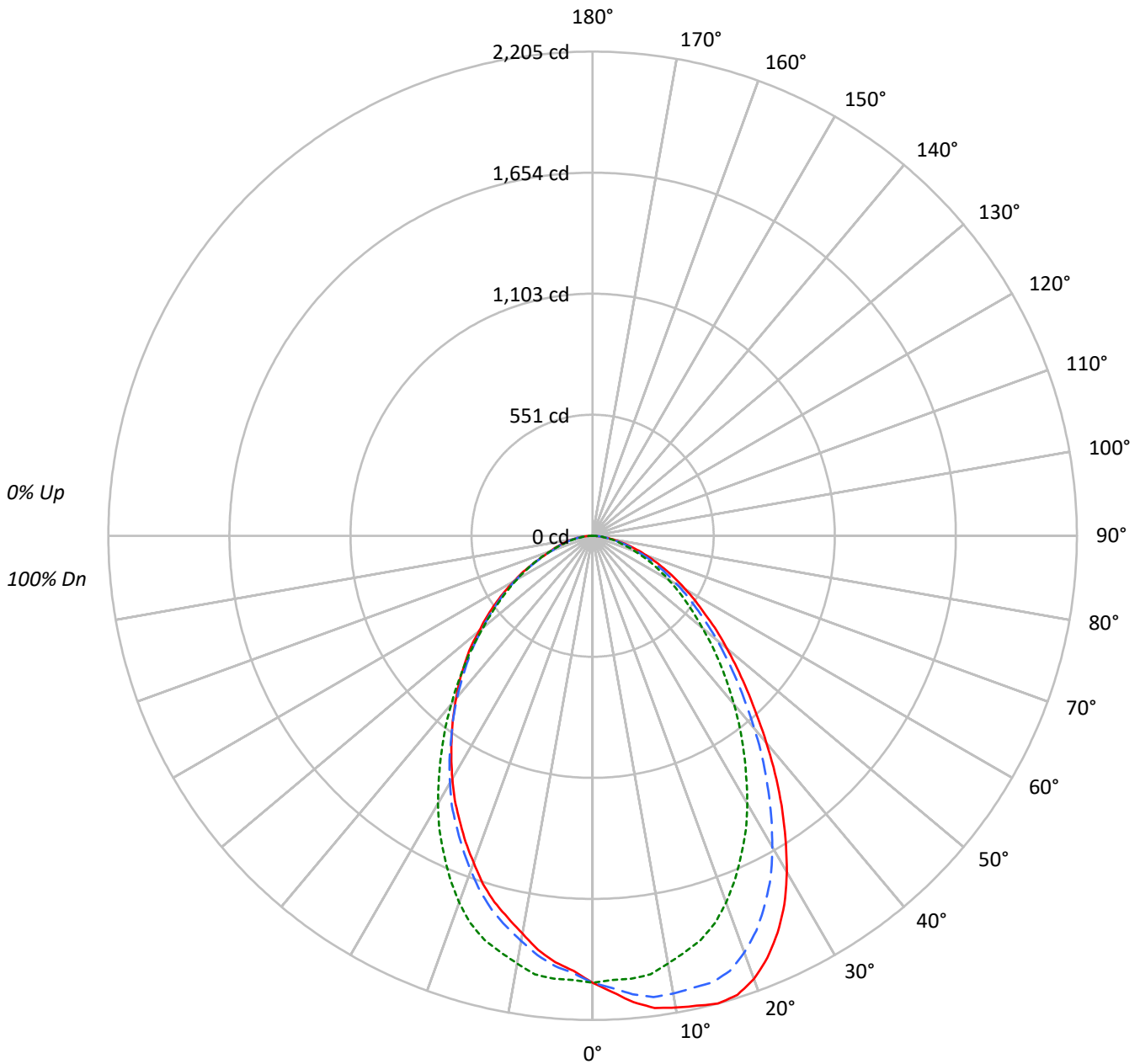
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	251070	251070	251070
5°	264002	250741	241356
10°	273267	247754	230394
15°	281623	243237	220558
20°	281924	233226	207853
25°	271336	218000	194877
30°	251940	200595	181979
35°	225851	180602	168406
40°	198163	161145	155671
45°	173216	142655	143579
50°	152938	124845	129354
55°	134856	110706	116319
60°	120533	97986	101859
65°	106763	86186	86186
70°	93297	73534	73534
75°	79683	62240	69722
80°	63147	55689	63147
85°	40617	48118	59298



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.9	4.9
10°-20°	543.1	13.8
20°-30°	760.9	19.3
30°-40°	783.9	19.9
40°-50°	667.4	16.9
50°-60°	494.5	12.5
60°-70°	310.3	7.9
70°-80°	154.2	3.9
80°-90°	40.5	1.0
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°	1496.8	37.9
0°-40°	2280.7	57.8
0°-60°	3442.6	87.2
0°-90°	3947.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3947.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2036	2036	2036	2036	2036	
5°	2132	2096	2025	1968	1949	205
15°	2205	2106	1905	1766	1727	620
25°	1994	1855	1602	1463	1432	912
35°	1500	1388	1199	1121	1118	935
45°	993	925	818	802	823	770
55°	627	578	515	525	541	567
65°	366	329	295	290	295	365
75°	167	149	131	141	146	179
85°	29	29	34	39	42	37
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°	2035.5	2035.5	2035.5	2035.5	2035.5	2035.5	2035.5	2035.5	2035.5
2.5°	2080.0	2072.1	2061.7	2043.4	2025.1	2009.4	1993.7	1985.8	1983.2
5°	2132.2	2116.5	2095.7	2061.7	2025.1	1993.7	1967.5	1954.5	1949.3
7.5°	2168.8	2153.1	2119.1	2066.8	2014.7	1967.5	1925.8	1907.5	1902.2
10°	2181.8	2163.6	2116.5	2046.0	1978.1	1920.5	1873.5	1850.0	1839.5
12.5°	2192.3	2168.8	2108.7	2025.1	1941.4	1870.9	1821.2	1789.9	1782.1
15°	2205.4	2179.3	2106.1	2004.1	1904.8	1821.2	1766.4	1737.6	1727.2
17.5°	2192.3	2163.6	2077.4	1962.4	1850.0	1758.5	1698.5	1672.3	1661.9
20°	2147.8	2116.5	2019.8	1897.1	1776.8	1682.8	1622.6	1596.5	1583.5
22.5°	2080.0	2046.0	1946.7	1816.1	1693.2	1601.8	1544.3	1518.2	1510.3
25°	1993.7	1959.8	1855.2	1721.9	1601.8	1512.9	1463.3	1439.8	1431.9
27.5°	1891.8	1857.8	1755.9	1625.3	1510.3	1426.7	1387.5	1364.0	1358.7
30°	1768.9	1735.1	1635.8	1515.5	1408.4	1330.0	1298.6	1280.3	1277.7
32.5°	1633.1	1604.3	1512.9	1403.2	1301.3	1236.0	1212.4	1199.4	1196.7
35°	1499.9	1468.5	1387.5	1288.2	1199.4	1141.9	1121.0	1118.4	1118.4
37.5°	1364.0	1332.6	1267.3	1175.9	1100.1	1047.8	1040.0	1042.6	1042.6
40°	1230.7	1202.0	1144.4	1068.7	1000.8	961.6	959.0	964.2	966.8
42.5°	1105.3	1081.8	1029.5	964.2	906.7	875.4	878.0	888.4	896.3
45°	993.0	972.0	925.0	867.5	817.8	794.4	802.2	815.2	823.1
47.5°	891.0	872.7	828.4	776.1	734.2	718.5	729.1	744.7	755.1
50°	797.0	781.2	739.5	684.6	650.6	640.2	653.2	668.9	674.1
52.5°	713.4	697.7	653.2	606.2	580.1	574.9	587.9	600.9	608.8
55°	627.1	614.1	577.5	535.6	514.8	512.2	525.2	535.6	540.9
57.5°	556.5	543.5	509.5	472.9	454.6	452.1	465.1	472.9	475.6
60°	488.6	475.6	444.2	410.2	397.2	397.2	405.0	410.2	412.9
62.5°	425.9	412.9	384.1	355.3	344.9	344.9	344.9	347.5	355.3
65°	365.8	355.3	329.2	303.1	295.3	290.0	290.0	290.0	295.3
67.5°	310.9	300.5	279.6	256.0	248.2	240.4	237.8	243.0	243.0
70°	258.7	250.9	229.9	211.6	203.9	196.0	193.3	203.9	203.9
72.5°	211.6	203.9	190.7	172.5	164.6	162.0	167.2	172.5	175.0
75°	167.2	159.4	148.9	138.5	130.6	133.3	141.1	143.7	146.3
77.5°	125.4	122.9	112.3	104.6	104.6	107.2	112.3	117.6	120.2
80°	88.9	86.3	81.0	75.7	78.4	83.6	86.3	91.4	88.9
82.5°	54.9	54.9	52.3	52.3	54.9	60.1	62.7	65.3	68.0
85°	28.7	28.7	28.7	31.3	34.0	36.6	39.2	41.9	41.9
87.5°	7.9	10.4	10.4	13.0	15.7	15.7	18.3	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)