

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: P580754

Luminaire Tested: **HC445D010-HM44560840-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580754
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: HC445D010-HM44560840-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5232.1 lumens
Efficiency: N/A
Efficacy: 118.9 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

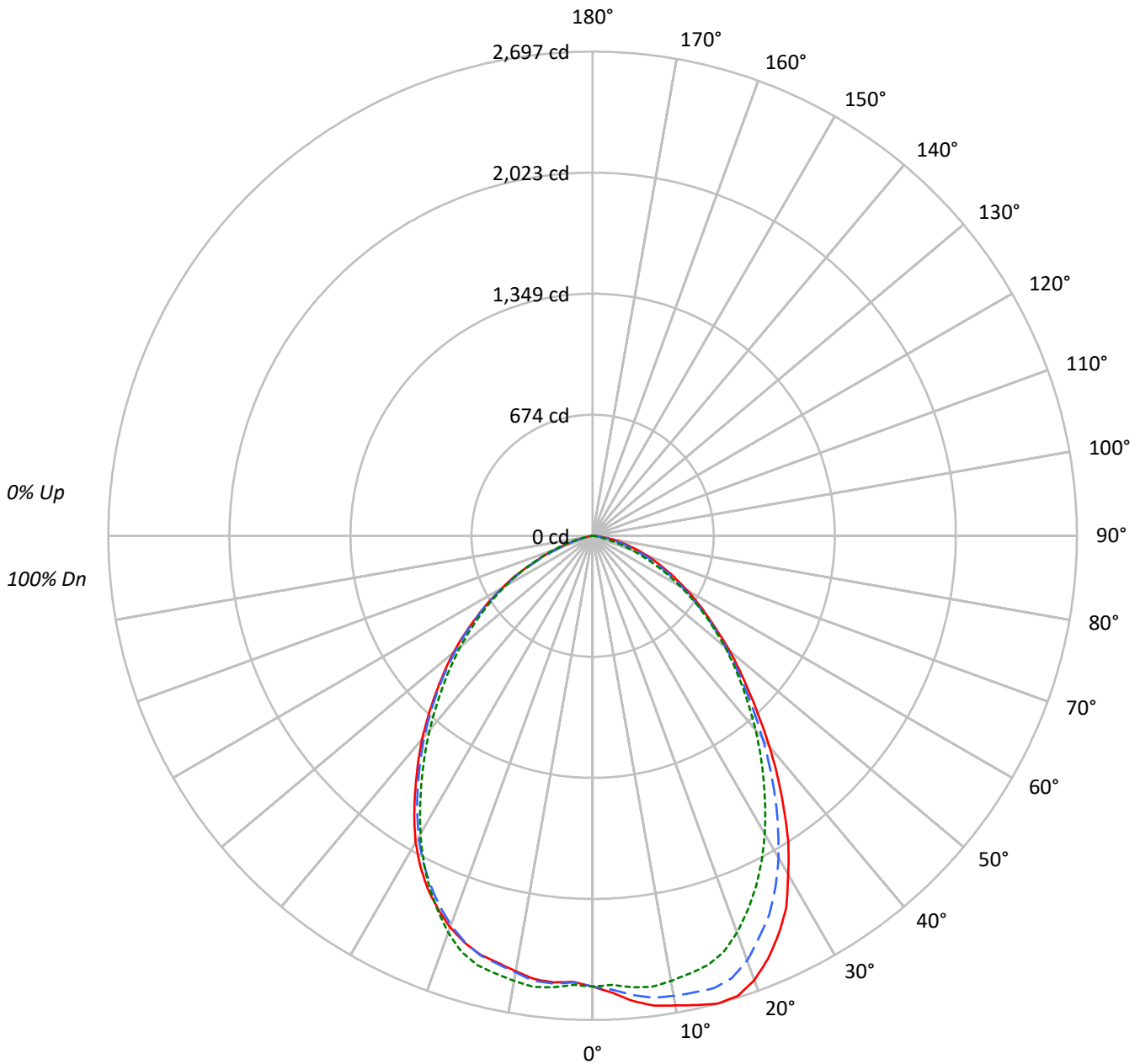
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76								
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67								
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58								
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41								
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37								
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	309696	309696	309696
5°	322221	312563	309195
10°	332748	315313	308512
15°	344449	316279	308490
20°	345599	308649	304619
25°	333396	293234	295534
30°	310249	273033	280781
35°	279456	249838	259038
40°	246387	227274	237660
45°	215430	204772	214837
50°	190760	184254	194022
55°	167822	162726	169285
60°	149816	138937	143130
65°	131717	112892	110907
70°	115044	83199	75878
75°	95409	50088	40413
80°	72310	19321	12004
85°	33683	4812	4812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.2	4.6
10°-20°	706.7	13.5
20°-30°	1023.5	19.6
30°-40°	1079.8	20.6
40°-50°	934.5	17.9
50°-60°	692.3	13.2
60°-70°	399.1	7.6
70°-80°	139.3	2.7
80°-90°	14.6	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°	1972.4	37.7
0°-40°	3052.2	58.3
0°-60°	4679.1	89.4
0°-90°	5232.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5232.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2511	2511	2511	2511	2511	
5°	2602	2568	2524	2504	2497	250
15°	2697	2609	2477	2419	2416	759
25°	2450	2328	2155	2141	2172	1121
35°	1856	1771	1659	1696	1720	1159
45°	1235	1201	1174	1218	1232	959
55°	780	763	757	784	787	704
65°	451	424	387	366	380	451
75°	200	170	105	85	85	215
85°	24	14	3	3	3	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°	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8
2.5°	2548.1	2541.3	2531.1	2517.5	2504.0	2493.9	2490.4	2487.0	2487.0
5°	2602.4	2588.8	2568.5	2541.3	2524.4	2514.2	2504.0	2497.2	2497.2
7.5°	2639.7	2626.2	2595.6	2558.3	2534.6	2514.2	2500.6	2490.4	2490.4
10°	2656.7	2639.7	2602.4	2554.9	2517.5	2490.4	2470.1	2463.2	2463.2
12.5°	2677.1	2656.7	2605.8	2544.7	2497.2	2463.2	2442.9	2436.2	2436.2
15°	2697.4	2673.6	2609.2	2538.0	2476.8	2436.2	2419.1	2415.8	2415.8
17.5°	2687.2	2656.7	2582.1	2497.2	2429.4	2388.6	2371.7	2371.7	2375.0
20°	2632.9	2602.4	2517.5	2422.6	2351.4	2320.7	2307.2	2314.0	2320.7
22.5°	2551.5	2514.2	2422.6	2331.0	2256.3	2229.2	2229.2	2239.4	2249.5
25°	2449.7	2415.8	2327.6	2225.8	2154.6	2134.2	2141.0	2157.9	2171.5
27.5°	2334.3	2297.1	2205.4	2110.4	2039.1	2029.0	2046.0	2069.8	2076.5
30°	2178.3	2147.7	2069.8	1978.1	1917.0	1913.7	1937.4	1954.3	1971.4
32.5°	2029.0	1995.0	1920.4	1832.2	1788.1	1791.5	1818.6	1839.0	1849.2
35°	1855.9	1825.4	1771.1	1699.8	1659.2	1665.9	1696.5	1716.9	1720.3
37.5°	1693.1	1672.7	1618.5	1564.2	1533.7	1547.2	1574.4	1598.1	1598.1
40°	1530.2	1513.2	1472.5	1428.4	1411.5	1428.4	1455.6	1476.0	1476.0
42.5°	1374.1	1364.0	1330.0	1299.5	1289.3	1313.1	1336.9	1353.8	1350.4
45°	1235.0	1224.9	1201.1	1177.3	1173.9	1197.7	1218.0	1228.3	1231.6
47.5°	1109.5	1102.7	1082.4	1065.3	1065.3	1089.1	1106.1	1116.3	1119.6
50°	994.1	987.4	970.4	956.8	960.2	984.0	997.6	1007.7	1011.1
52.5°	878.8	875.4	861.8	844.9	855.1	872.0	889.0	895.7	899.2
55°	780.4	780.4	763.4	749.8	756.7	773.6	783.8	787.2	787.2
57.5°	692.2	688.8	668.4	654.8	658.3	675.2	682.0	685.4	685.4
60°	607.3	604.0	583.6	563.2	563.2	573.5	576.8	580.2	580.2
62.5°	525.9	522.5	498.7	481.8	475.1	471.6	471.6	478.4	492.0
65°	451.3	447.9	424.1	397.0	386.8	376.7	366.4	373.2	380.0
67.5°	383.4	376.7	352.9	329.1	305.4	288.4	271.4	281.6	295.2
70°	319.0	312.1	285.0	257.8	230.7	203.5	190.0	203.5	210.4
72.5°	257.8	251.1	224.0	196.8	162.9	135.8	132.3	135.8	139.1
75°	200.2	196.8	169.6	139.1	105.1	84.8	84.8	84.8	84.8
77.5°	149.3	142.5	115.3	88.2	61.0	47.5	44.1	44.1	44.1
80°	101.8	95.0	71.2	50.9	27.2	20.3	20.3	16.9	16.9
82.5°	57.7	54.3	37.4	20.3	10.2	6.7	6.7	6.7	6.7
85°	23.8	20.3	13.6	6.7	3.4	3.4	3.4	3.4	3.4
87.5°	3.4	3.4	3.4	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)