

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: P592924

Luminaire Tested: **HC455D010-HM44560850-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592924  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC455D010-HM44560850-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5703.9 lumens  
Efficiency: N/A  
Efficacy: 109.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

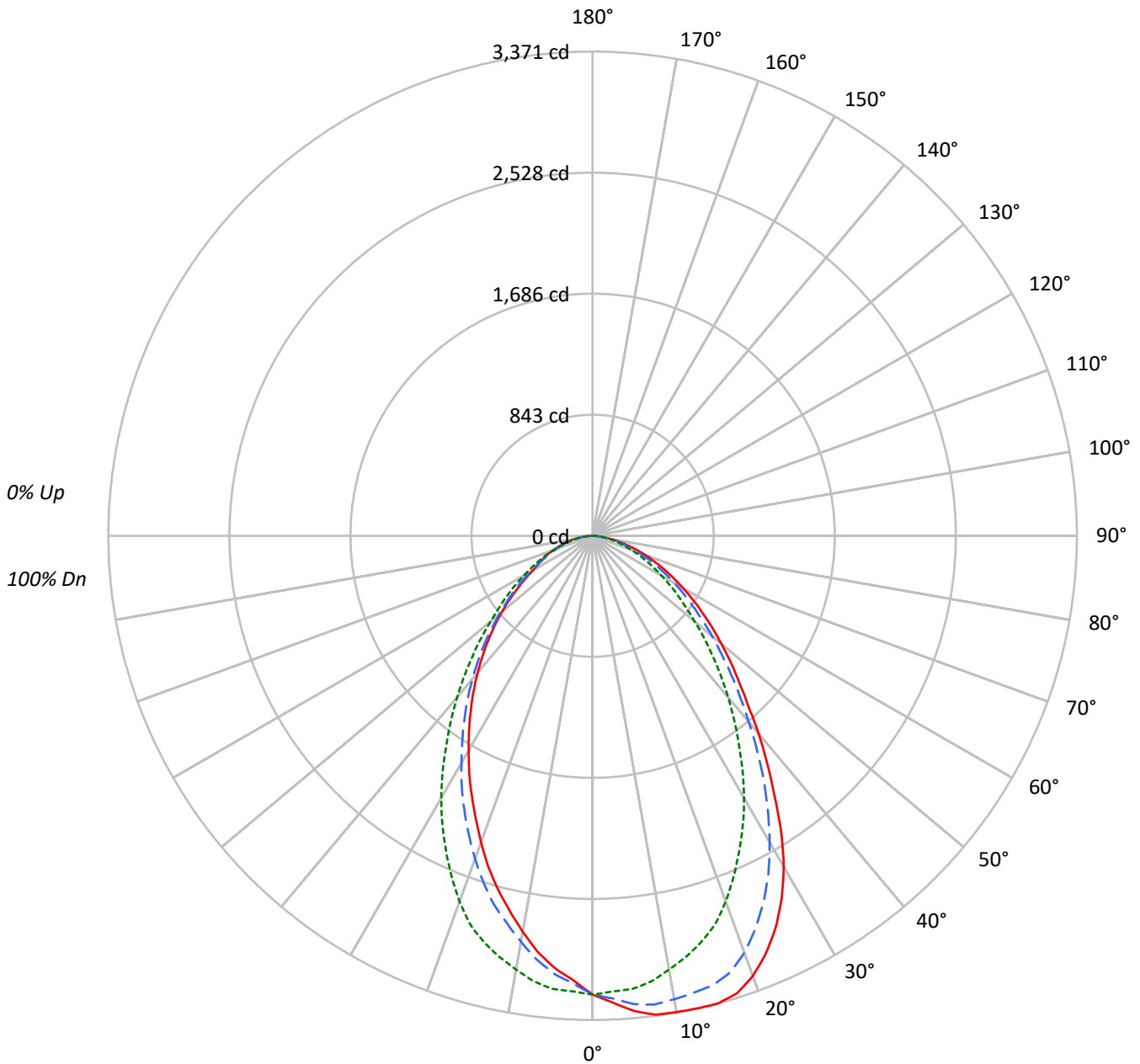
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
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	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35																			
10	59	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°	393978	393978	393978
5°	411295	392227	374075
10°	421699	384049	350633
15°	430415	373794	325333
20°	428136	355627	297925
25°	410141	328837	271050
30°	378913	300237	245644
35°	332143	267079	222372
40°	289217	235969	200272
45°	251695	205818	178955
50°	224245	177385	157908
55°	200423	155973	136576
60°	178925	136272	117721
65°	159006	119546	111870
70°	139567	102998	104333
75°	118237	87784	96744
80°	90779	74726	88080
85°	53213	58449	74441



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	299.4	5.2
10°-20°	825.8	14.5
20°-30°	1128.3	19.8
30°-40°	1133.0	19.9
40°-50°	937.2	16.4
50°-60°	679.2	11.9
60°-70°	430.2	7.5
70°-80°	217.5	3.8
80°-90°	53.2	0.9
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°	2253.5	39.5
0°-40°	3386.5	59.4
0°-60°	5003.0	87.7
0°-90°	5703.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5703.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3194	3194	3194	3194	3194	
5°	3322	3273	3168	3062	3021	318
15°	3371	3239	2927	2657	2548	948
25°	3014	2814	2416	2112	1992	1377
35°	2206	2074	1774	1556	1477	1383
45°	1443	1360	1180	1064	1026	1122
55°	932	849	725	661	635	838
65°	545	485	410	368	383	542
75°	248	214	184	192	203	265
85°	38	38	41	49	53	52
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°	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1
2.5°	3254.2	3242.9	3224.1	3201.5	3175.3	3145.2	3118.8	3103.9	3096.3
5°	3321.8	3306.8	3273.0	3224.1	3167.8	3111.4	3062.5	3032.4	3021.2
7.5°	3363.2	3340.6	3291.8	3216.6	3130.2	3047.5	2976.1	2934.8	2923.5
10°	3366.9	3340.6	3276.7	3175.3	3066.3	2957.3	2870.9	2810.8	2799.5
12.5°	3370.6	3336.9	3257.9	3137.6	3002.4	2867.2	2761.9	2690.5	2671.8
15°	3370.6	3336.9	3239.1	3096.3	2927.2	2773.2	2656.7	2574.0	2547.7
17.5°	3340.6	3303.0	3186.6	3021.2	2837.0	2664.2	2528.9	2442.5	2416.2
20°	3261.7	3220.3	3088.8	2908.5	2709.3	2528.9	2393.7	2303.4	2269.7
22.5°	3149.0	3100.0	2961.1	2765.7	2566.5	2382.4	2250.9	2157.0	2126.8
25°	3013.6	2964.8	2814.5	2622.8	2416.2	2243.4	2111.8	2025.4	1991.6
27.5°	2848.4	2795.7	2649.2	2457.6	2265.9	2093.1	1972.8	1893.9	1860.1
30°	2660.4	2604.0	2465.1	2280.9	2108.0	1942.8	1826.2	1762.3	1724.7
32.5°	2442.5	2393.7	2269.7	2104.3	1942.8	1784.9	1687.2	1630.8	1600.8
35°	2205.8	2179.5	2074.3	1931.5	1773.7	1642.2	1555.6	1503.1	1476.8
37.5°	1995.3	1969.1	1878.9	1758.6	1619.6	1499.3	1428.0	1382.9	1360.2
40°	1796.2	1773.7	1687.2	1585.8	1465.5	1360.2	1300.2	1266.3	1243.8
42.5°	1600.8	1589.5	1518.1	1424.1	1319.0	1228.7	1179.9	1153.6	1134.8
45°	1442.9	1428.0	1360.2	1270.1	1179.9	1104.8	1063.5	1044.7	1025.9
47.5°	1303.9	1285.1	1213.8	1134.8	1052.2	984.5	946.9	928.1	920.6
50°	1168.6	1149.9	1086.0	1007.1	924.4	875.6	845.4	826.6	822.9
52.5°	1048.4	1029.6	958.2	883.0	819.2	777.8	751.5	732.7	725.3
55°	932.0	909.3	849.3	777.8	725.3	687.7	661.4	642.6	635.1
57.5°	826.6	804.2	751.5	683.9	635.1	601.2	578.7	559.9	552.4
60°	725.3	706.5	657.6	593.7	552.4	522.3	499.7	484.8	477.2
62.5°	631.4	616.3	567.4	511.1	477.2	450.9	432.1	417.2	424.6
65°	544.8	529.9	484.8	435.9	409.6	383.3	368.2	368.2	383.3
67.5°	462.2	447.2	409.6	368.2	345.7	326.9	315.7	326.9	338.2
70°	387.0	372.0	338.2	304.4	285.6	270.6	270.6	281.8	289.3
72.5°	315.7	300.6	274.3	248.1	233.0	221.7	233.0	240.5	248.1
75°	248.1	236.7	214.2	195.4	184.2	180.3	191.6	199.1	203.0
77.5°	184.2	176.6	161.5	146.6	139.0	142.8	154.0	157.8	161.5
80°	127.8	124.0	112.7	105.2	105.2	109.0	116.4	120.3	124.0
82.5°	78.9	78.9	71.4	67.6	71.4	78.9	82.7	86.4	86.4
85°	37.6	41.3	37.6	37.6	41.3	48.8	48.8	52.6	52.6
87.5°	11.2	11.2	15.1	15.1	18.8	18.8	18.8	18.8	22.5
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)