

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: P580016

Luminaire Tested: **HC420D010-HM40525835-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580016  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC420D010-HM40525835-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2023.1 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

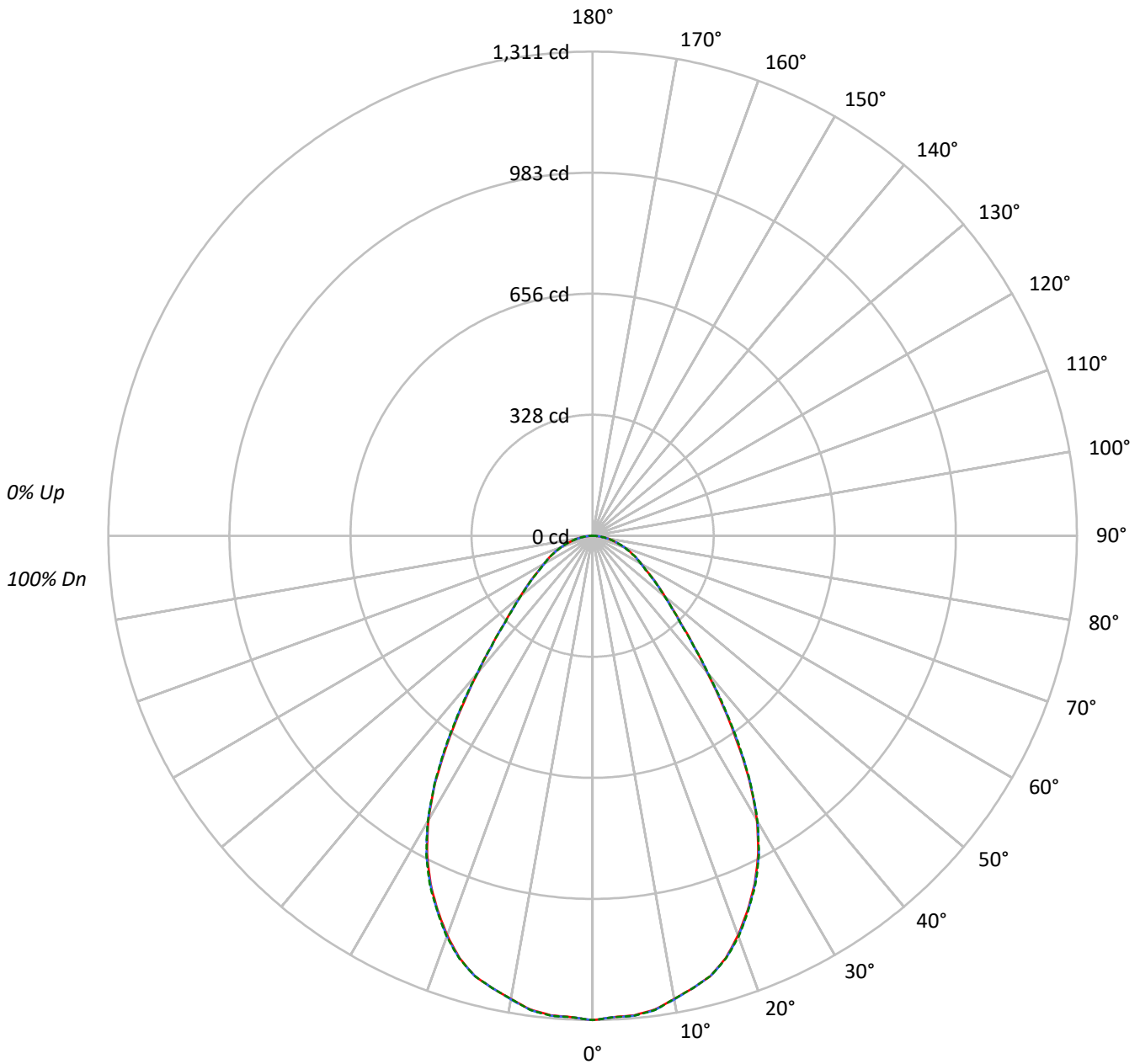
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89																			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78																			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69																			
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56																			
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51																			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46																			
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39																			
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36																			

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

	0°	45°	90°
0°	161743	161743	161743
5°	161346	161519	161519
10°	159479	159629	159479
15°	157552	157552	157552
20°	151082	151450	151620
25°	141323	141513	141881
30°	126618	127017	127017
35°	102814	103627	103838
40°	77594	78028	78254
45°	59431	59204	59204
50°	48971	48702	48702
55°	42020	41741	41741
60°	37497	37176	37176
65°	35257	35257	35257
70°	32818	32818	32818
75°	29738	30405	29738
80°	27916	26992	27916
85°	23068	23068	23068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.5	6.1
10°-20°	345.7	17.1
20°-30°	475.1	23.5
30°-40°	427.2	21.1
40°-50°	269.9	13.3
50°-60°	176.2	8.7
60°-70°	119.4	5.9
70°-80°	67.2	3.3
80°-90°	18.9	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°	944.3	46.7
0°-40°	1371.5	67.8
0°-60°	1817.6	89.8
0°-90°	2023.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2023.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1311	1311	1311	1311	1311	
5°	1303	1303	1304	1304	1304	123
15°	1234	1234	1234	1234	1234	345
25°	1038	1040	1040	1042	1042	474
35°	683	685	688	691	690	425
45°	341	339	339	339	339	270
55°	195	195	194	195	194	177
65°	121	121	121	121	121	120
75°	62	64	64	64	62	67
85°	16	16	16	16	16	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1311.3	1311.3	1311.3	1311.3	1311.3
2.5°	1304.5	1304.5	1304.5	1304.5	1304.5
5°	1303.1	1303.1	1304.5	1304.5	1304.5
7.5°	1293.6	1295.0	1295.0	1295.0	1295.0
10°	1273.3	1273.3	1274.5	1274.5	1273.3
12.5°	1254.2	1254.2	1254.2	1255.6	1254.2
15°	1233.8	1233.8	1233.8	1233.8	1233.8
17.5°	1198.6	1199.9	1199.9	1199.9	1199.9
20°	1151.0	1153.8	1153.8	1155.1	1155.1
22.5°	1096.8	1098.1	1099.5	1100.9	1099.5
25°	1038.4	1039.8	1039.8	1042.5	1042.5
27.5°	970.5	971.9	974.6	974.6	974.6
30°	889.0	890.4	891.8	891.8	891.8
32.5°	792.7	792.7	795.4	796.8	795.4
35°	682.8	685.4	688.2	691.0	689.6
37.5°	578.2	581.0	582.3	582.3	583.7
40°	481.9	484.6	484.6	487.2	486.0
42.5°	405.8	404.5	404.5	407.2	405.8
45°	340.7	339.4	339.4	339.4	339.4
47.5°	293.2	291.8	291.8	291.8	291.8
50°	255.2	253.8	253.8	253.8	253.8
52.5°	224.0	222.6	222.6	222.6	221.3
55°	195.4	195.4	194.1	195.4	194.1
57.5°	169.6	169.6	169.6	169.6	169.6
60°	152.0	150.7	150.7	150.7	150.7
62.5°	135.7	135.7	135.7	135.7	135.7
65°	120.8	120.8	120.8	120.8	120.8
67.5°	105.9	104.5	105.9	105.9	104.5
70°	91.0	89.6	91.0	91.0	91.0
72.5°	76.0	76.0	76.0	77.4	76.0
75°	62.4	63.8	63.8	63.8	62.4
77.5°	50.2	51.6	50.2	50.2	50.2
80°	39.3	38.0	38.0	38.0	39.3
82.5°	27.2	27.2	27.2	27.2	27.2
85°	16.3	16.3	16.3	16.3	16.3
87.5°	6.8	6.8	6.8	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)