

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: P580145

Luminaire Tested: **HC425D010-HM40525830-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580145  
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: HC425D010-HM40525830-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2427.3 lumens  
Efficiency: N/A  
Efficacy: 90.6 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

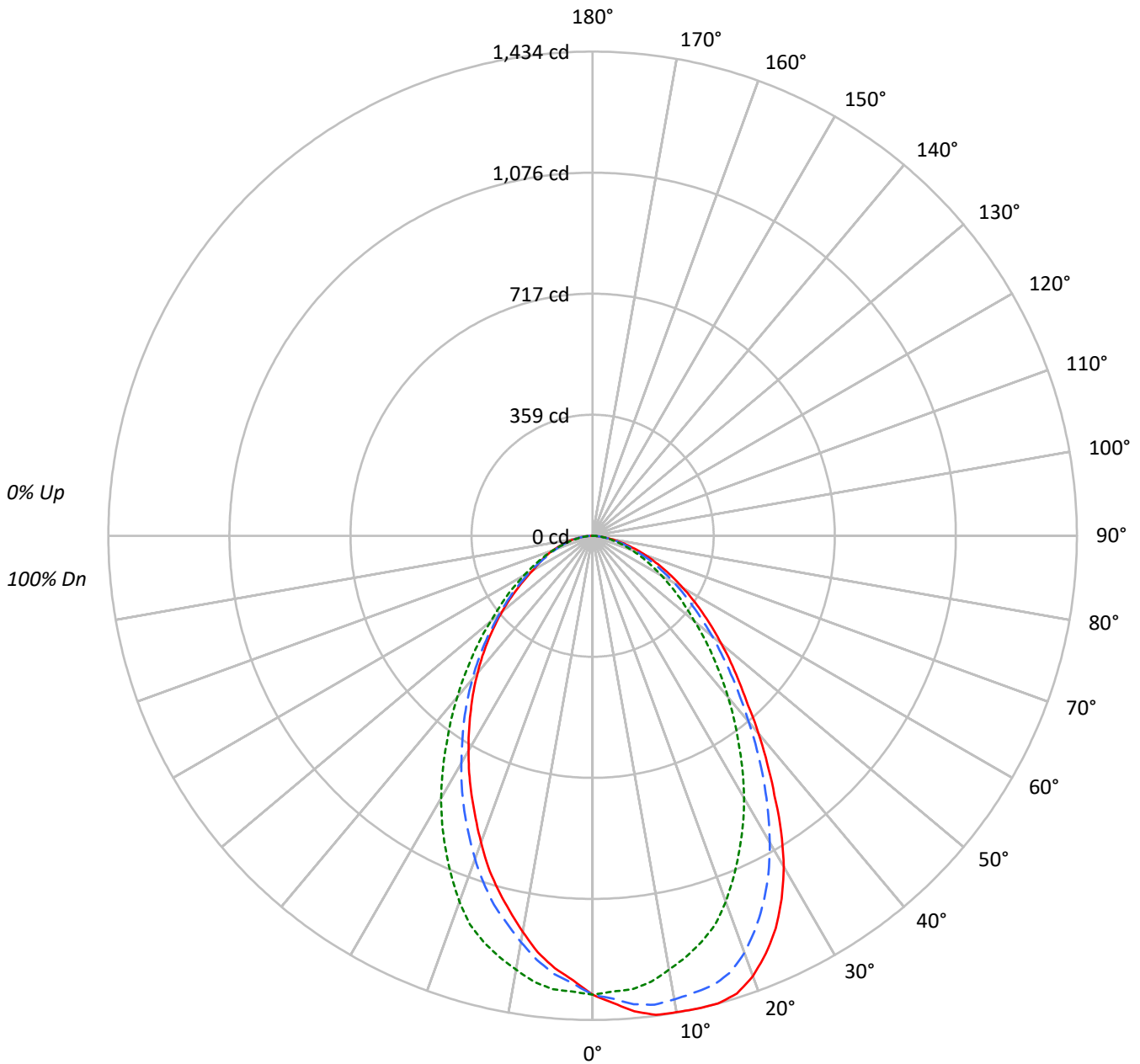
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	167651	167651	167651
5°	175027	166905	159191
10°	179456	163437	149208
15°	183168	159072	138449
20°	182191	151332	126786
25°	174531	139935	115342
30°	161256	127771	104542
35°	141347	113641	94623
40°	123065	100426	85226
45°	107122	87585	76159
50°	95428	75471	67200
55°	85287	66385	58127
60°	76154	57997	50103
65°	67682	50871	47602
70°	59397	43818	44431
75°	50326	37363	41176
80°	38641	31822	37434
85°	22644	24908	31701



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.4	5.2
10°-20°	351.4	14.5
20°-30°	480.1	19.8
30°-40°	482.1	19.9
40°-50°	398.8	16.4
50°-60°	289.0	11.9
60°-70°	183.1	7.5
70°-80°	92.6	3.8
80°-90°	22.7	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°	959.0	39.5
0°-40°	1441.1	59.4
0°-60°	2129.0	87.7
0°-90°	2427.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2427.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1359	1359	1359	1359	1359	
5°	1414	1393	1348	1303	1286	135
15°	1434	1378	1246	1131	1084	403
25°	1282	1198	1028	899	848	586
35°	939	883	755	662	628	588
45°	614	579	502	452	437	478
55°	397	361	309	282	270	357
65°	232	206	174	157	163	231
75°	106	91	78	82	86	113
85°	16	16	18	21	22	22
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°	1359.2	1359.2	1359.2	1359.2	1359.2	1359.2	1359.2	1359.2	1359.2
2.5°	1384.8	1380.0	1372.1	1362.5	1351.2	1338.4	1327.3	1320.8	1317.7
5°	1413.6	1407.2	1392.8	1372.1	1348.0	1324.1	1303.3	1290.4	1285.7
7.5°	1431.2	1421.6	1400.9	1368.8	1332.1	1296.9	1266.5	1248.9	1244.0
10°	1432.8	1421.6	1394.4	1351.2	1304.9	1258.5	1221.7	1196.2	1191.3
12.5°	1434.4	1420.1	1386.4	1335.3	1277.7	1220.1	1175.3	1144.9	1137.0
15°	1434.4	1420.1	1378.4	1317.7	1245.7	1180.1	1130.6	1095.4	1084.2
17.5°	1421.6	1405.6	1356.0	1285.7	1207.4	1133.7	1076.2	1039.5	1028.2
20°	1388.0	1370.4	1314.5	1237.7	1152.9	1076.2	1018.6	980.2	965.9
22.5°	1340.0	1319.2	1260.1	1177.0	1092.2	1013.8	957.8	917.9	905.1
25°	1282.4	1261.7	1197.8	1116.1	1028.2	954.7	898.7	861.9	847.5
27.5°	1212.1	1189.7	1127.4	1045.8	964.3	890.7	839.5	806.0	791.5
30°	1132.2	1108.2	1049.0	970.6	897.1	826.8	777.2	750.0	734.0
32.5°	1039.5	1018.6	965.9	895.5	826.8	759.6	718.0	694.0	681.2
35°	938.7	927.5	882.7	821.9	754.7	698.9	662.0	639.7	628.4
37.5°	849.1	837.9	799.6	748.4	689.3	638.0	607.6	588.4	578.8
40°	764.3	754.7	718.0	674.8	623.7	578.8	553.3	538.9	529.3
42.5°	681.2	676.4	646.0	606.0	561.3	523.0	502.1	490.9	482.9
45°	614.1	607.6	578.8	540.5	502.1	470.1	452.5	444.6	436.6
47.5°	554.9	546.9	516.5	482.9	447.8	419.0	402.9	394.9	391.8
50°	497.3	489.3	462.1	428.6	393.3	372.6	359.8	351.8	350.2
52.5°	446.2	438.2	407.8	375.8	348.6	331.0	319.8	311.8	308.7
55°	396.6	387.0	361.4	331.0	308.7	292.6	281.5	273.4	270.3
57.5°	351.8	342.2	319.8	291.1	270.3	255.8	246.2	238.2	235.1
60°	308.7	300.7	279.9	252.7	235.1	222.3	212.7	206.3	203.1
62.5°	268.7	262.3	241.5	217.4	203.1	191.9	183.9	177.5	180.8
65°	231.9	225.5	206.3	185.5	174.3	163.1	156.7	156.7	163.1
67.5°	196.7	190.3	174.3	156.7	147.1	139.1	134.4	139.1	143.9
70°	164.7	158.3	143.9	129.5	121.5	115.2	115.2	119.9	123.2
72.5°	134.4	127.9	116.7	105.6	99.1	94.4	99.1	102.3	105.6
75°	105.6	100.7	91.1	83.2	78.4	76.8	81.5	84.8	86.4
77.5°	78.4	75.2	68.8	62.3	59.2	60.7	65.6	67.2	68.8
80°	54.4	52.7	48.0	44.8	44.8	46.4	49.6	51.1	52.7
82.5°	33.5	33.5	30.4	28.8	30.4	33.5	35.2	36.8	36.8
85°	16.0	17.6	16.0	16.0	17.6	20.8	20.8	22.4	22.4
87.5°	4.7	4.7	6.4	6.4	8.0	8.0	8.0	8.0	9.6
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)