

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: P580522

Luminaire Tested: **HC435D010-HM43040935-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580522  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040935-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

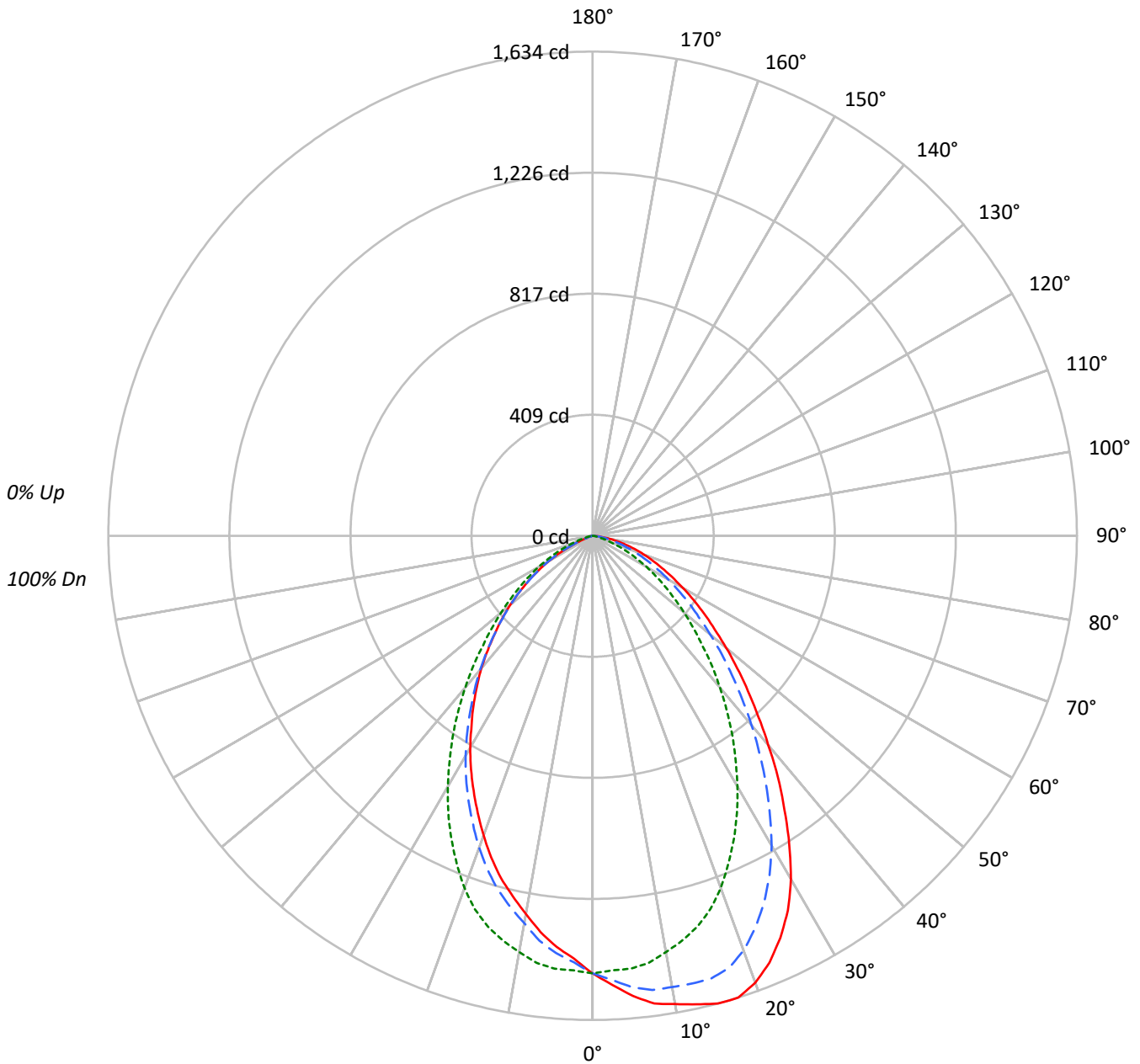
Lumens per Lamp: N/A  
Luminaire Lumens: 2550.9 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

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

	0°	90°	180°
0°	182157	182157	182157
5°	193006	181565	172440
10°	201024	178654	162347
15°	208708	174357	152649
20°	210675	165994	141185
25°	203846	153517	129238
30°	190582	139137	117588
35°	169851	123684	105645
40°	148489	107559	94034
45°	129363	91248	81340
50°	112871	77390	69733
55°	98943	64148	56471
60°	86539	51830	41444
65°	75417	38613	23290
70°	65925	25028	7573
75°	54043	13010	2002
80°	40346	5967	1492
85°	23917	2972	2972



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.4	5.5
10°-20°	390.1	15.3
20°-30°	539.4	21.1
30°-40°	542.3	21.3
40°-50°	437.6	17.2
50°-60°	295.9	11.6
60°-70°	150.6	5.9
70°-80°	48.2	1.9
80°-90°	7.4	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°	1068.8	41.9
0°-40°	1611.2	63.2
0°-60°	2344.7	91.9
0°-90°	2550.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1477	1477	1477	1477	1477	
5°	1559	1529	1466	1414	1393	150
15°	1634	1546	1365	1235	1195	460
25°	1498	1368	1128	990	950	685
35°	1128	1019	821	718	702	705
45°	742	664	523	466	466	575
55°	460	397	298	260	263	413
65°	258	210	132	86	80	259
75°	113	80	27	6	4	122
85°	17	8	2	2	2	23
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°	1476.8	1476.8	1476.8	1476.8	1476.8	1476.8	1476.8	1476.8	1476.8
2.5°	1516.7	1508.3	1500.0	1485.3	1468.4	1451.6	1441.1	1432.8	1428.5
5°	1558.8	1548.2	1529.3	1497.8	1466.4	1436.9	1413.8	1399.0	1392.7
7.5°	1592.4	1577.6	1546.2	1502.0	1453.7	1407.5	1378.1	1357.1	1348.7
10°	1605.0	1588.2	1546.2	1487.3	1426.4	1369.7	1327.7	1306.6	1296.2
12.5°	1619.7	1600.8	1548.2	1474.7	1399.0	1331.8	1283.6	1256.3	1245.7
15°	1634.4	1609.1	1546.2	1455.8	1365.4	1287.8	1235.3	1208.0	1195.4
17.5°	1634.4	1605.0	1529.3	1424.3	1321.4	1239.4	1180.6	1149.1	1138.6
20°	1605.0	1571.4	1489.4	1373.9	1264.6	1176.4	1119.7	1088.1	1075.6
22.5°	1558.8	1520.9	1432.8	1312.9	1197.4	1111.3	1054.5	1025.2	1012.6
25°	1497.8	1460.0	1367.6	1243.6	1128.0	1041.9	989.5	962.1	949.6
27.5°	1426.4	1384.4	1291.9	1168.1	1054.5	972.6	924.4	899.1	888.6
30°	1338.1	1298.2	1208.0	1086.1	976.9	901.2	857.0	834.0	825.6
32.5°	1235.3	1201.7	1113.4	999.9	897.1	827.7	787.8	768.9	760.5
35°	1128.0	1096.6	1018.9	913.8	821.4	756.2	718.5	705.9	701.6
37.5°	1027.2	999.9	924.4	827.7	743.6	687.0	653.4	645.0	640.7
40°	922.2	903.4	834.0	745.8	668.0	617.6	590.3	584.0	584.0
42.5°	827.7	806.7	745.8	666.0	596.6	546.2	527.3	521.0	523.1
45°	741.6	720.6	663.8	590.3	523.1	481.1	466.3	466.3	466.3
47.5°	661.7	642.8	590.3	514.7	460.1	426.4	411.7	411.7	413.9
50°	588.2	575.6	516.8	451.6	403.3	371.8	361.4	359.2	363.4
52.5°	518.8	504.2	451.6	392.8	346.6	321.5	310.9	308.8	310.9
55°	460.1	443.3	397.0	340.3	298.3	273.1	260.5	258.4	262.6
57.5°	403.3	390.7	342.4	292.0	252.1	226.9	216.4	212.2	214.2
60°	350.8	338.2	294.2	245.8	210.1	184.9	170.2	166.0	168.0
62.5°	302.5	292.0	250.0	203.8	168.0	145.0	130.3	119.7	124.0
65°	258.4	247.8	210.1	163.9	132.3	107.1	86.1	77.8	79.8
67.5°	220.5	207.9	172.3	130.3	98.7	71.4	48.3	44.1	44.1
70°	182.8	170.2	138.7	100.8	69.4	37.8	21.0	21.0	21.0
72.5°	147.0	136.6	107.1	75.6	44.1	16.9	8.4	8.4	8.4
75°	113.4	105.0	79.8	52.5	27.3	8.4	6.3	4.2	4.2
77.5°	84.1	75.6	56.8	35.7	16.9	4.2	4.2	4.2	4.2
80°	56.8	50.5	37.8	21.0	8.4	2.1	2.1	2.1	2.1
82.5°	33.6	29.4	21.0	10.5	4.2	2.1	2.1	2.1	2.1
85°	16.9	12.6	8.4	4.2	2.1	2.1	2.1	2.1	2.1
87.5°	4.2	2.1	2.1	2.1	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)