

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: P580504

Luminaire Tested: **HC435D010-HM43040930-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580504  
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-HM43040930-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2445.7 lumens  
Efficiency: N/A  
Efficacy: 72.6 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

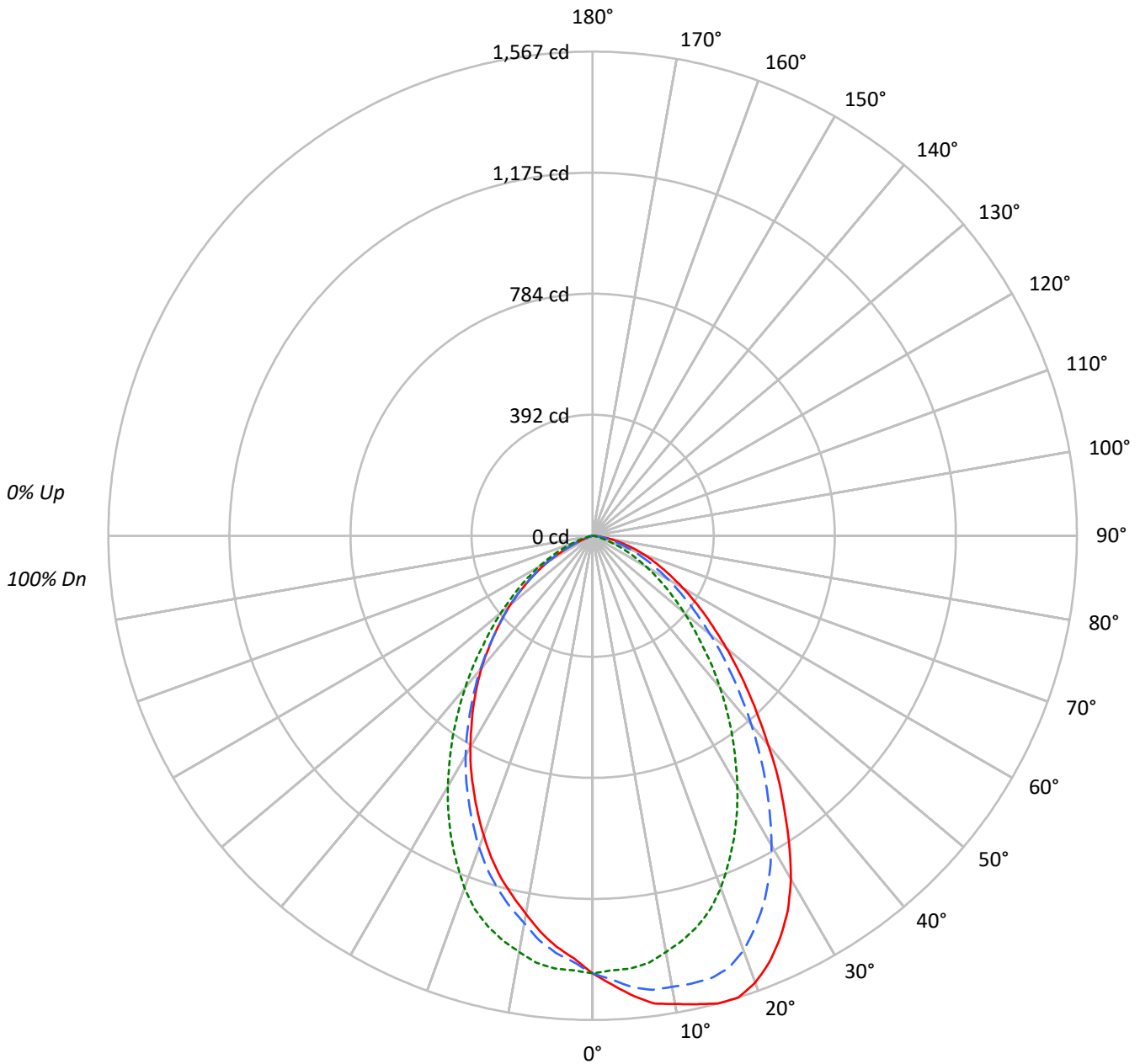
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	174645	174645	174645
5°	185044	174062	165333
10°	192732	171290	155646
15°	200101	167168	146341
20°	201985	159155	135357
25°	195435	147189	123889
30°	182720	133383	112731
35°	162849	118580	101293
40°	142354	103131	90153
45°	124007	87480	77991
50°	108208	74205	66855
55°	94857	61482	54149
60°	82962	49684	39767
65°	72294	37037	22327
70°	63184	23946	7249
75°	51851	12486	1906
80°	38641	5754	1421
85°	22785	2830	2830



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.6	5.5
10°-20°	374.0	15.3
20°-30°	517.1	21.1
30°-40°	520.0	21.3
40°-50°	419.6	17.2
50°-60°	283.7	11.6
60°-70°	144.4	5.9
70°-80°	46.2	1.9
80°-90°	7.1	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°	1024.7	41.9
0°-40°	1544.7	63.2
0°-60°	2248.0	91.9
0°-90°	2445.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2445.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1416	1416	1416	1416	1416	
5°	1494	1466	1406	1355	1335	144
15°	1567	1482	1309	1184	1146	441
25°	1436	1311	1082	949	910	657
35°	1082	977	788	689	673	676
45°	711	636	502	447	447	551
55°	441	381	286	250	252	396
65°	248	201	127	83	76	248
75°	109	76	26	6	4	117
85°	16	8	2	2	2	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°	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9	1415.9
2.5°	1454.1	1446.1	1438.0	1424.0	1407.8	1391.7	1381.6	1373.6	1369.6
5°	1494.5	1484.4	1466.3	1436.0	1405.8	1377.7	1355.4	1341.4	1335.3
7.5°	1526.7	1512.6	1482.3	1440.1	1393.8	1349.5	1321.3	1301.1	1293.0
10°	1538.8	1522.7	1482.3	1426.0	1367.6	1313.2	1272.9	1252.8	1242.7
12.5°	1552.8	1534.7	1484.4	1413.9	1341.4	1277.0	1230.6	1204.5	1194.4
15°	1567.0	1542.8	1482.3	1395.8	1309.1	1234.6	1184.2	1158.1	1146.0
17.5°	1567.0	1538.8	1466.3	1365.5	1266.9	1188.3	1131.9	1101.7	1091.6
20°	1538.8	1506.5	1428.0	1317.2	1212.5	1127.9	1073.5	1043.3	1031.2
22.5°	1494.5	1458.2	1373.6	1258.8	1148.1	1065.4	1011.0	982.8	970.8
25°	1436.0	1399.8	1311.1	1192.3	1081.5	999.0	948.7	922.5	910.3
27.5°	1367.6	1327.3	1238.6	1119.8	1011.0	932.5	886.2	862.0	852.0
30°	1282.9	1244.7	1158.1	1041.3	936.5	864.0	821.8	799.6	791.5
32.5°	1184.2	1152.1	1067.5	958.7	860.0	793.5	755.3	737.1	729.1
35°	1081.5	1051.4	976.9	876.2	787.5	725.1	688.8	676.8	672.7
37.5°	984.8	958.7	886.2	793.5	713.0	658.6	626.4	618.3	614.3
40°	884.1	866.0	799.6	715.0	640.5	592.1	565.9	559.9	559.9
42.5°	793.5	773.4	715.0	638.4	572.0	523.7	505.6	499.5	501.5
45°	710.9	690.8	636.4	565.9	501.5	461.2	447.1	447.1	447.1
47.5°	634.4	616.3	565.9	493.4	441.1	408.9	394.7	394.7	396.8
50°	563.9	551.9	495.5	433.1	386.7	356.5	346.4	344.4	348.4
52.5°	497.5	483.4	433.1	376.7	332.4	308.2	298.1	296.1	298.1
55°	441.1	425.0	380.7	326.3	285.9	261.8	249.8	247.7	251.8
57.5°	386.7	374.6	328.3	280.0	241.7	217.5	207.5	203.4	205.5
60°	336.3	324.3	282.0	235.7	201.4	177.3	163.1	159.2	161.2
62.5°	290.0	280.0	239.6	195.4	161.2	138.9	124.9	114.8	118.8
65°	247.7	237.6	201.4	157.1	126.9	102.7	82.6	74.5	76.5
67.5°	211.4	199.4	165.1	124.9	94.6	68.5	46.3	42.3	42.3
70°	175.2	163.1	133.0	96.7	66.4	36.3	20.1	20.1	20.1
72.5°	140.9	130.9	102.7	72.5	42.3	16.1	8.1	8.1	8.1
75°	108.8	100.7	76.5	50.4	26.2	8.1	6.1	4.0	4.0
77.5°	80.6	72.5	54.4	34.3	16.1	4.0	4.0	4.0	4.0
80°	54.4	48.3	36.3	20.1	8.1	2.0	2.0	2.0	2.0
82.5°	32.3	28.2	20.1	10.1	4.0	2.0	2.0	2.0	2.0
85°	16.1	12.1	8.1	4.0	2.0	2.0	2.0	2.0	2.0
87.5°	4.0	2.0	2.0	2.0	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)