

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: P580004

Luminaire Tested: **HC420D010-HM40525830-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580004  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC420D010-HM40525830-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2009.4 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

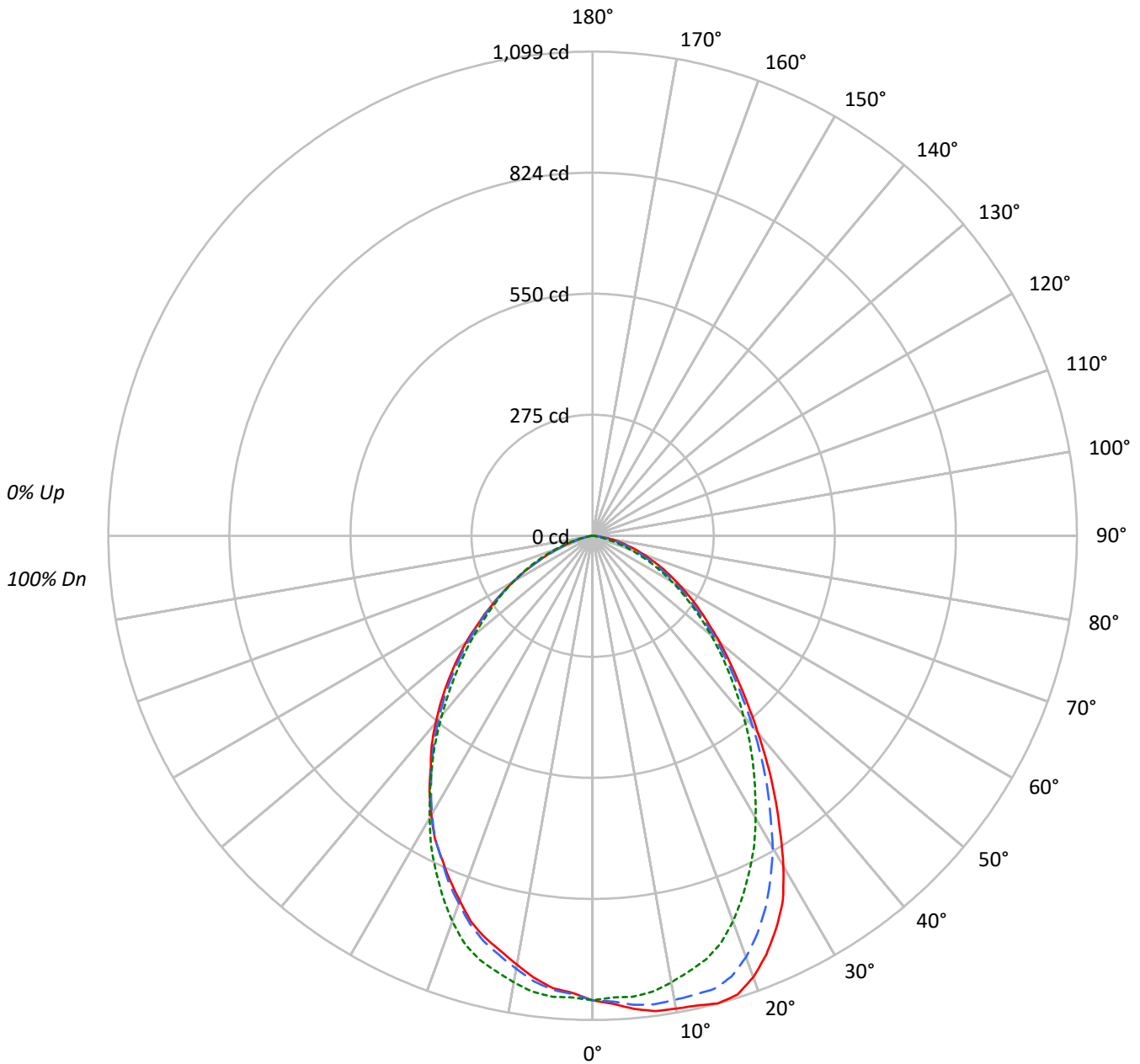
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				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			100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47			47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35			35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

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

	0°	90°	180°
0°	130031	130031	130031
5°	133450	130045	127618
10°	136471	128918	123833
15°	140313	127109	120571
20°	139925	122218	115694
25°	134028	114430	110143
30°	123285	105382	104271
35°	108461	95647	96430
40°	93840	85612	89203
45°	81549	76072	80625
50°	72362	67105	71614
55°	64213	58858	61396
60°	57183	51040	51040
65°	50842	42407	39722
70°	43926	32097	28346
75°	36839	21207	17490
80°	27916	10300	9305
85°	14718	3680	3680



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	5.0
10°-20°	283.0	14.1
20°-30°	399.2	19.9
30°-40°	412.4	20.5
40°-50°	349.6	17.4
50°-60°	254.3	12.7
60°-70°	148.6	7.4
70°-80°	55.2	2.7
80°-90°	7.2	0.4
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°	782.1	38.9
0°-40°	1194.4	59.4
0°-60°	1798.3	89.5
0°-90°	2009.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2009.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1054	1054	1054	1054	1054	
5°	1078	1069	1050	1035	1031	103
15°	1099	1065	995	953	944	309
25°	985	930	841	811	809	450
35°	720	689	635	636	640	450
45°	468	454	436	452	462	364
55°	299	284	274	283	286	269
65°	174	160	145	136	136	173
75°	77	64	44	35	37	83
85°	10	6	3	3	3	15
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°	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2
2.5°	1063.4	1060.7	1058.2	1054.2	1049.0	1045.0	1041.1	1038.5	1038.5
5°	1077.8	1073.9	1068.7	1059.5	1050.3	1042.5	1034.6	1030.7	1030.7
7.5°	1088.3	1083.1	1072.6	1059.5	1043.8	1032.0	1020.1	1015.0	1012.3
10°	1089.6	1084.4	1069.9	1050.3	1029.3	1011.1	997.9	990.1	988.7
12.5°	1092.2	1085.6	1067.3	1039.9	1012.3	990.1	975.6	967.8	965.2
15°	1098.8	1089.6	1064.8	1029.3	995.4	969.1	953.4	946.8	944.2
17.5°	1092.2	1079.1	1049.0	1007.1	969.1	940.3	924.6	918.1	918.1
20°	1066.0	1052.9	1017.6	971.7	931.1	903.6	887.9	884.0	881.4
22.5°	1029.3	1015.0	977.0	928.5	887.9	863.0	852.6	847.3	846.0
25°	984.8	970.5	929.9	880.1	840.8	819.9	810.7	810.7	809.3
27.5°	935.0	916.7	874.8	831.6	793.6	777.9	774.0	774.0	775.3
30°	865.6	852.6	817.2	775.3	739.9	729.5	729.5	732.1	732.1
32.5°	791.0	781.8	750.4	713.8	686.3	679.7	682.4	687.5	688.9
35°	720.3	709.8	688.9	656.1	635.2	632.6	636.5	640.4	640.4
37.5°	650.9	640.4	626.0	599.8	584.1	585.4	590.6	595.9	599.8
40°	582.8	574.9	564.4	543.4	531.7	536.9	543.4	548.7	554.0
42.5°	522.6	514.7	506.9	491.1	483.2	489.8	497.7	502.8	508.1
45°	467.5	462.2	454.4	441.4	436.1	442.6	451.8	457.1	462.2
47.5°	420.4	417.7	407.3	395.5	392.8	399.4	407.3	413.8	417.7
50°	377.1	373.2	364.1	352.2	349.7	360.2	365.4	369.3	373.2
52.5°	335.3	331.4	320.8	310.4	310.4	318.3	322.2	323.5	327.4
55°	298.6	294.7	284.2	276.3	273.7	280.2	282.9	282.9	285.5
57.5°	264.5	260.6	250.2	241.0	239.6	243.6	243.6	243.6	244.9
60°	231.8	227.9	217.4	209.6	206.9	208.2	206.9	205.7	206.9
62.5°	201.6	197.7	187.3	178.1	175.5	175.5	171.6	170.2	171.6
65°	174.2	167.6	159.8	150.6	145.3	141.4	136.1	136.1	136.1
67.5°	146.7	141.4	132.2	123.1	116.5	110.0	102.2	104.7	106.1
70°	121.8	117.9	107.4	98.2	89.0	81.2	74.7	77.3	78.6
72.5°	99.6	94.3	85.1	74.7	66.8	56.3	52.4	55.1	55.1
75°	77.3	72.0	64.1	53.7	44.5	35.3	35.3	36.7	36.7
77.5°	57.6	52.4	44.5	35.3	27.5	21.0	22.3	22.3	22.3
80°	39.3	35.3	28.8	21.0	14.5	11.8	11.8	11.8	13.1
82.5°	22.3	19.6	15.7	10.4	6.5	6.5	6.5	6.5	6.5
85°	10.4	7.9	6.5	3.9	2.6	2.6	2.6	2.6	2.6
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)