

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: P580037

Luminaire Tested: **HC420D010-HM40525840-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580037  
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: HC420D010-HM40525840-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2118.0 lumens  
Efficiency: N/A  
Efficacy: 105.9 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

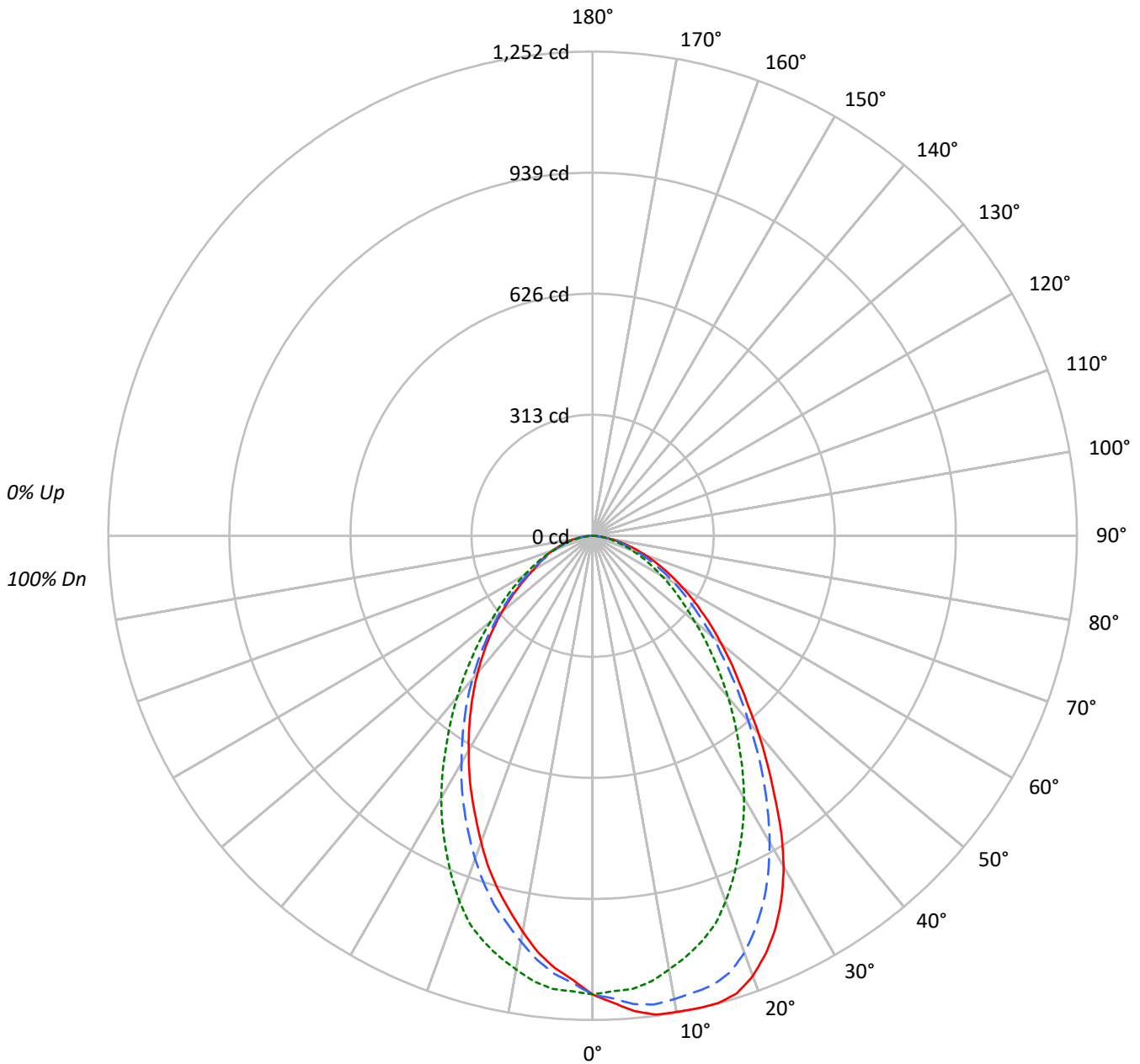
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			100																
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87																
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76																
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66																
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58																
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52			52																
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47			47																
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35			35																
10	59	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°	146288	146288	146288
5°	152728	145633	138910
10°	156586	142608	130196
15°	159825	138806	120801
20°	158971	132049	110627
25°	152292	122106	100657
30°	140704	111492	91225
35°	123338	99170	82577
40°	107398	87609	74373
45°	93463	76438	66443
50°	83262	65876	58642
55°	74406	57912	50708
60°	66434	50596	43714
65°	59043	44392	41532
70°	51824	38264	38769
75°	43892	32597	35933
80°	33740	27773	32675
85°	19813	21795	27597



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.2	5.2
10°-20°	306.7	14.5
20°-30°	419.0	19.8
30°-40°	420.7	19.9
40°-50°	348.0	16.4
50°-60°	252.2	11.9
60°-70°	159.7	7.5
70°-80°	80.8	3.8
80°-90°	19.8	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°	836.8	39.5
0°-40°	1257.5	59.4
0°-60°	1857.7	87.7
0°-90°	2118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2118.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1234	1215	1176	1137	1122	118
15°	1252	1203	1087	986	946	352
25°	1119	1045	897	784	740	511
35°	819	770	659	578	548	513
45°	536	505	438	395	381	417
55°	346	315	269	246	236	311
65°	202	180	152	137	142	201
75°	92	80	68	71	75	98
85°	14	14	15	18	20	19
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°	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0
2.5°	1208.4	1204.2	1197.2	1188.9	1179.1	1167.9	1158.1	1152.5	1149.8
5°	1233.5	1227.9	1215.4	1197.2	1176.2	1155.4	1137.3	1126.0	1121.9
7.5°	1248.9	1240.5	1222.4	1194.4	1162.4	1131.6	1105.1	1089.8	1085.5
10°	1250.2	1240.5	1216.7	1179.1	1138.6	1098.1	1066.0	1043.8	1039.5
12.5°	1251.6	1239.1	1209.7	1165.1	1114.9	1064.6	1025.5	999.0	992.0
15°	1251.6	1239.1	1202.7	1149.8	1087.0	1029.8	986.5	955.8	946.0
17.5°	1240.5	1226.5	1183.2	1121.9	1053.5	989.3	939.0	906.9	897.2
20°	1211.1	1195.9	1147.0	1080.0	1006.0	939.0	888.8	855.3	842.8
22.5°	1169.3	1151.1	1099.5	1027.0	953.0	884.7	835.8	801.0	789.7
25°	1119.0	1100.9	1045.1	973.9	897.2	833.1	784.2	752.1	739.6
27.5°	1057.6	1038.1	983.7	912.6	841.4	777.2	732.6	703.2	690.7
30°	987.9	966.9	915.3	846.9	782.8	721.3	678.1	654.4	640.5
32.5°	906.9	888.8	842.8	781.3	721.3	662.7	626.5	605.6	594.4
35°	819.1	809.3	770.2	717.2	658.6	609.7	577.6	558.1	548.4
37.5°	741.0	731.2	697.7	653.0	601.4	556.8	530.3	513.5	505.1
40°	667.0	658.6	626.5	588.9	544.1	505.1	482.8	470.3	461.9
42.5°	594.4	590.2	563.8	528.9	489.8	456.3	438.2	428.4	421.4
45°	535.8	530.3	505.1	471.6	438.2	410.3	394.9	387.9	380.9
47.5°	484.1	477.2	450.7	421.4	390.7	365.5	351.7	344.7	341.8
50°	433.9	427.0	403.3	373.9	343.3	325.1	313.9	306.9	305.6
52.5°	389.3	382.3	355.8	327.9	304.2	288.8	279.1	272.1	269.3
55°	346.0	337.7	315.3	288.8	269.3	255.3	245.6	238.6	235.8
57.5°	306.9	298.6	279.1	253.9	235.8	223.2	214.8	208.0	205.1
60°	269.3	262.3	244.2	220.5	205.1	194.0	185.6	180.0	177.2
62.5°	234.4	228.8	210.7	189.7	177.2	167.5	160.5	154.8	157.7
65°	202.3	196.7	180.0	161.8	152.1	142.3	136.7	136.7	142.3
67.5°	171.6	166.1	152.1	136.7	128.3	121.4	117.2	121.4	125.6
70°	143.7	138.1	125.6	113.0	106.1	100.5	100.5	104.6	107.5
72.5°	117.2	111.6	101.9	92.1	86.5	82.4	86.5	89.4	92.1
75°	92.1	87.9	79.5	72.6	68.4	67.0	71.1	74.0	75.4
77.5°	68.4	65.6	60.0	54.4	51.6	53.0	57.2	58.6	60.0
80°	47.5	46.0	41.9	39.1	39.1	40.5	43.2	44.6	46.0
82.5°	29.2	29.2	26.5	25.1	26.5	29.2	30.7	32.1	32.1
85°	14.0	15.4	14.0	14.0	15.4	18.1	18.1	19.5	19.5
87.5°	4.1	4.1	5.6	5.6	7.0	7.0	7.0	7.0	8.4
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)