

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: P580003

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580003
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC420D010-HM40525830-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2019.9 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

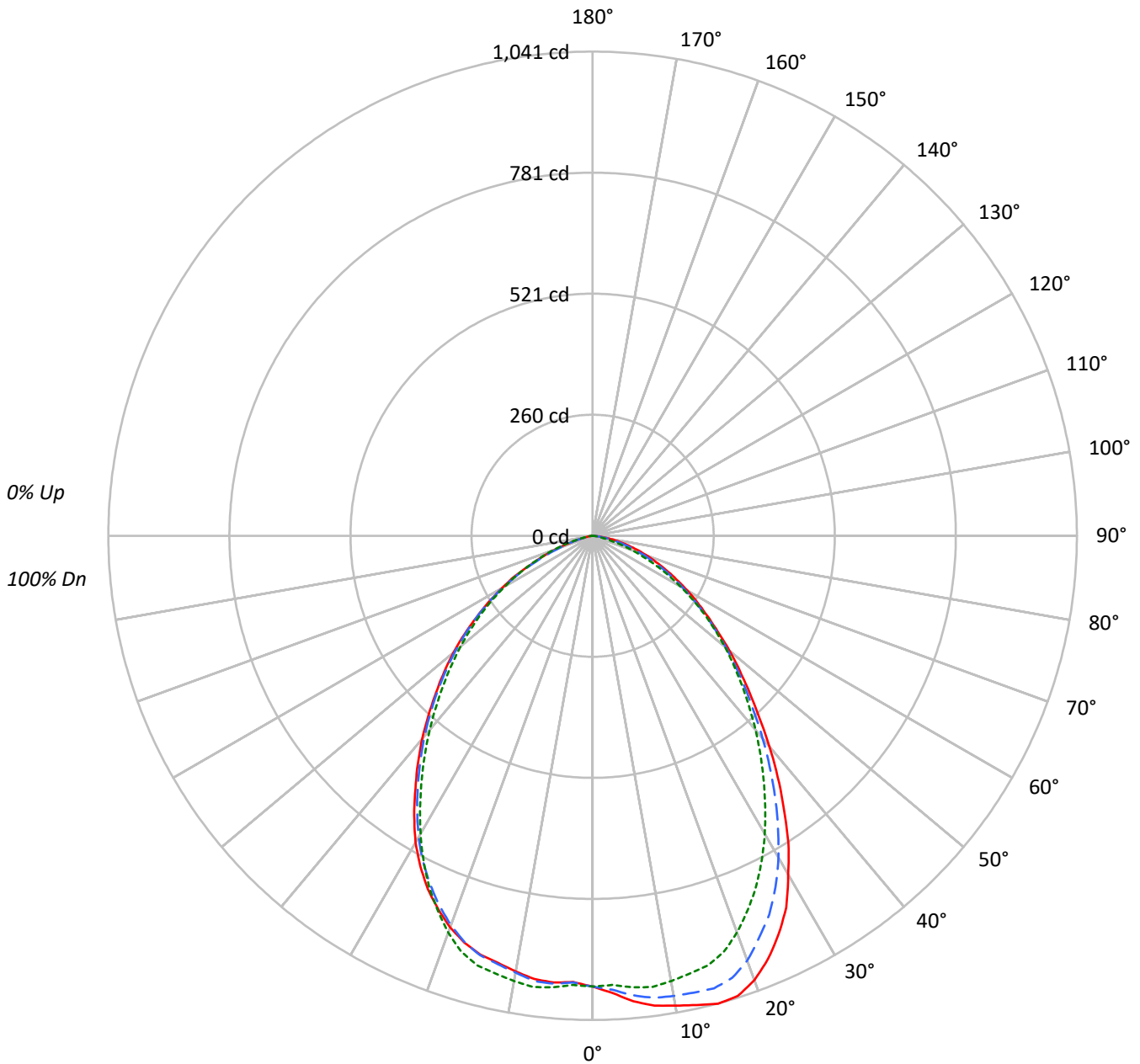
Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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																			
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76																			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41																			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	119559	119559	119559
5°	124399	120659	119372
10°	128455	121741	119111
15°	132983	122116	119090
20°	133427	119146	117597
25°	128707	113205	114090
30°	119781	105396	108387
35°	107889	96445	99998
40°	95112	87738	91747
45°	83172	79055	82927
50°	73648	71134	74895
55°	64794	62815	65331
60°	57824	53655	55259
65°	50842	43575	42816
70°	44395	32133	29284
75°	36839	19349	15584
80°	27916	7387	4617
85°	13020	1840	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	4.6
10°-20°	272.8	13.5
20°-30°	395.1	19.6
30°-40°	416.9	20.6
40°-50°	360.8	17.9
50°-60°	267.3	13.2
60°-70°	154.1	7.6
70°-80°	53.8	2.7
80°-90°	5.7	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°	761.5	37.7
0°-40°	1178.3	58.3
0°-60°	1806.4	89.4
0°-90°	2019.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2019.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	969	969	969	969	969	
5°	1005	992	974	967	964	96
15°	1041	1007	956	934	933	293
25°	946	899	832	826	838	433
35°	716	684	640	655	664	448
45°	477	464	453	470	475	370
55°	301	295	292	303	304	272
65°	174	164	149	141	147	174
75°	77	66	41	33	33	83
85°	9	5	1	1	1	14
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°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	983.7	981.1	977.1	972.0	966.7	962.8	961.4	960.2	960.2
5°	1004.7	999.4	991.6	981.1	974.5	970.6	966.7	964.1	964.1
7.5°	1019.1	1013.8	1002.0	987.7	978.5	970.6	965.4	961.4	961.4
10°	1025.6	1019.1	1004.7	986.3	972.0	961.4	953.6	951.0	951.0
12.5°	1033.4	1025.6	1006.0	982.4	964.1	951.0	943.1	940.5	940.5
15°	1041.4	1032.2	1007.3	979.8	956.3	940.5	933.9	932.6	932.6
17.5°	1037.5	1025.6	996.9	964.1	937.9	922.2	915.7	915.7	916.9
20°	1016.5	1004.7	972.0	935.3	907.7	895.9	890.8	893.3	895.9
22.5°	985.0	970.6	935.3	899.9	871.0	860.6	860.6	864.5	868.4
25°	945.7	932.6	898.6	859.2	831.8	823.9	826.5	833.1	838.3
27.5°	901.2	886.7	851.4	814.7	787.2	783.3	789.8	799.0	801.6
30°	841.0	829.2	799.0	763.7	740.0	738.8	748.0	754.5	761.0
32.5°	783.3	770.2	741.4	707.4	690.3	691.6	702.1	710.0	713.9
35°	716.5	704.7	683.7	656.2	640.5	643.1	654.9	662.9	664.1
37.5°	653.7	645.8	624.8	603.9	592.1	597.4	607.8	617.0	617.0
40°	590.7	584.2	568.5	551.5	544.9	551.5	561.9	569.8	569.8
42.5°	530.5	526.6	513.5	501.7	497.8	507.0	516.0	522.7	521.3
45°	476.8	472.9	463.7	454.6	453.2	462.4	470.3	474.2	475.4
47.5°	428.3	425.7	417.9	411.3	411.3	420.5	427.0	430.9	432.3
50°	383.8	381.1	374.6	369.3	370.7	379.9	385.0	389.1	390.3
52.5°	339.3	337.9	332.7	326.2	330.1	336.6	343.2	345.8	347.1
55°	301.3	301.3	294.7	289.5	292.1	298.7	302.6	303.8	303.8
57.5°	267.3	265.9	258.1	252.8	254.1	260.7	263.2	264.6	264.6
60°	234.4	233.2	225.3	217.5	217.5	221.4	222.6	224.0	224.0
62.5°	203.0	201.8	192.6	186.0	183.4	182.0	182.0	184.7	189.9
65°	174.2	172.9	163.7	153.2	149.3	145.4	141.4	144.1	146.7
67.5°	148.0	145.4	136.3	127.1	117.9	111.4	104.8	108.7	114.0
70°	123.1	120.5	110.0	99.6	89.1	78.6	73.4	78.6	81.2
72.5°	99.6	96.9	86.5	75.9	62.9	52.4	51.0	52.4	53.7
75°	77.3	75.9	65.5	53.7	40.6	32.7	32.7	32.7	32.7
77.5°	57.6	55.1	44.5	34.1	23.6	18.4	17.0	17.0	17.0
80°	39.3	36.7	27.5	19.6	10.4	7.9	7.9	6.5	6.5
82.5°	22.3	21.0	14.5	7.9	3.9	2.6	2.6	2.6	2.6
85°	9.2	7.9	5.3	2.6	1.3	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.3	0.0	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)