

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: P579986

Luminaire Tested: **HC420D010-HM40525827-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579986  
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-HM40525827-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1855.3 lumens  
Efficiency: N/A  
Efficacy: 92.8 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

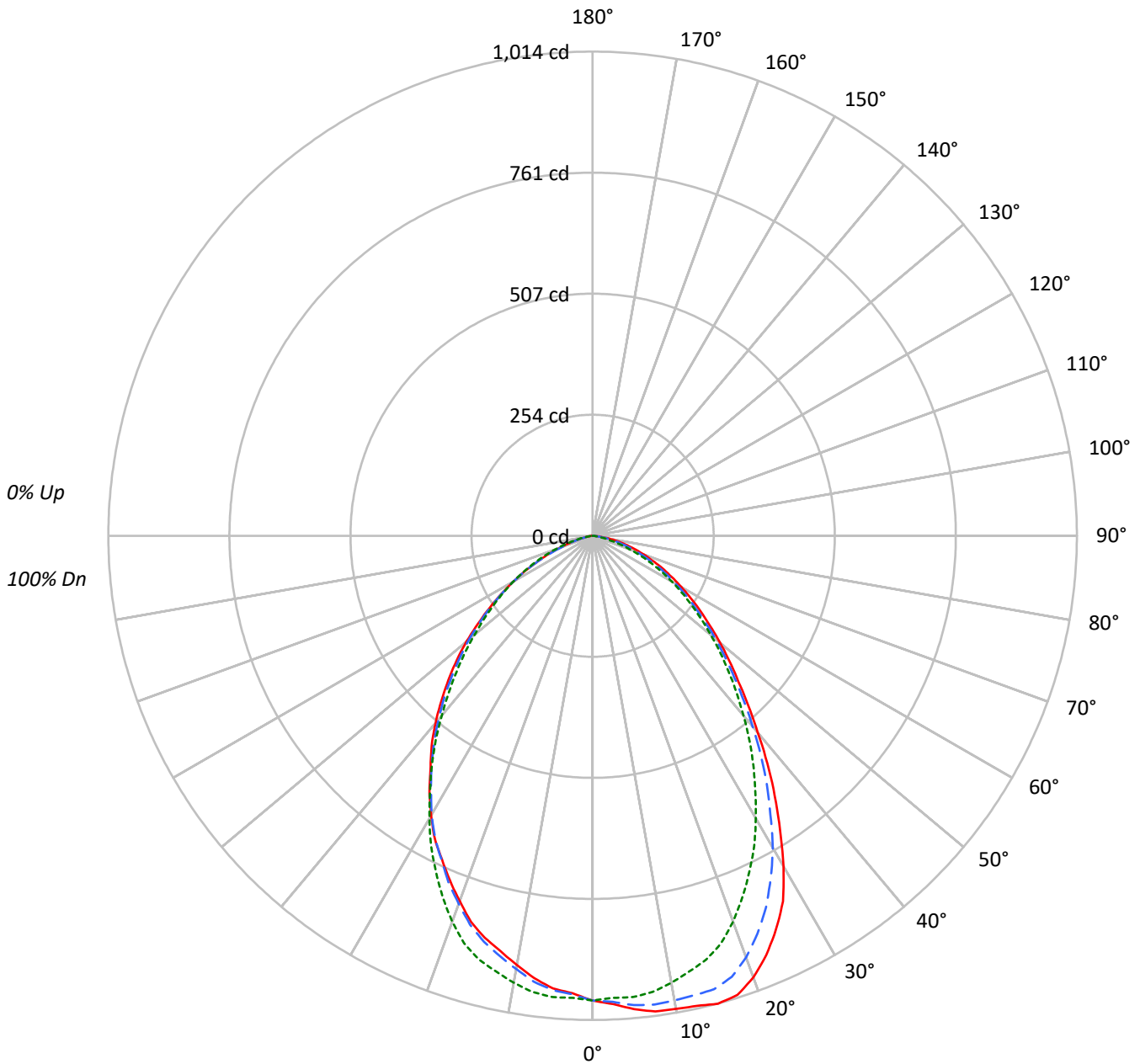
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				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°	120052	120052	120052
5°	123210	120065	117824
10°	126000	119036	114339
15°	129536	117353	111326
20°	129188	112846	106821
25°	123739	105652	101705
30°	113828	97306	96267
35°	100134	88314	89036
40°	86643	79043	82344
45°	75287	70228	74450
50°	66817	61962	66126
55°	59267	54342	56686
60°	52792	47143	47143
65°	46931	39168	36687
70°	40536	29644	26146
75°	33980	19587	16108
80°	25714	9447	8524
85°	13586	3397	3397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.2	5.0
10°-20°	261.3	14.1
20°-30°	368.5	19.9
30°-40°	380.7	20.5
40°-50°	322.7	17.4
50°-60°	234.8	12.7
60°-70°	137.2	7.4
70°-80°	51.0	2.7
80°-90°	6.7	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°	722.1	38.9
0°-40°	1102.8	59.4
0°-60°	1660.4	89.5
0°-90°	1855.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1855.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	973	973	973	973	973	
5°	995	987	970	955	952	95
15°	1014	983	919	880	872	285
25°	909	858	776	748	747	416
35°	665	636	586	588	591	415
45°	432	420	403	417	427	336
55°	276	262	253	261	264	248
65°	161	148	134	126	126	160
75°	71	59	41	33	34	77
85°	10	6	2	2	2	13
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°	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3
2.5°	981.8	979.4	977.0	973.3	968.5	964.9	961.3	958.9	958.9
5°	995.1	991.5	986.6	978.2	969.7	962.4	955.2	951.6	951.6
7.5°	1004.8	1000.0	990.3	978.2	963.7	952.8	941.9	937.1	934.7
10°	1006.0	1001.1	987.9	969.7	950.4	933.4	921.4	914.0	912.9
12.5°	1008.4	1002.4	985.4	960.0	934.7	914.0	900.9	893.5	891.1
15°	1014.4	1006.0	983.0	950.4	919.0	894.8	880.2	874.2	871.8
17.5°	1008.4	996.3	968.5	929.9	894.8	868.2	853.6	847.6	847.6
20°	984.2	972.1	939.5	897.2	859.7	834.3	819.8	816.2	813.8
22.5°	950.4	937.1	902.0	857.3	819.8	796.8	787.2	782.3	781.1
25°	909.2	895.9	858.5	812.5	776.3	756.9	748.4	748.4	747.3
27.5°	863.3	846.4	807.7	767.8	732.7	718.3	714.6	714.6	715.8
30°	799.2	787.2	754.5	715.8	683.2	673.5	673.5	675.9	675.9
32.5°	730.3	721.8	692.8	659.0	633.6	627.5	629.9	634.7	636.0
35°	665.0	655.4	636.0	605.7	586.5	584.1	587.6	591.3	591.3
37.5°	600.9	591.3	578.0	553.8	539.3	540.5	545.3	550.1	553.8
40°	538.1	530.8	521.1	501.8	490.9	495.7	501.8	506.6	511.4
42.5°	482.4	475.2	468.0	453.4	446.2	452.3	459.5	464.3	469.1
45°	431.6	426.8	419.6	407.5	402.6	408.7	417.2	422.0	426.8
47.5°	388.1	385.7	376.0	365.2	362.7	368.8	376.0	382.1	385.7
50°	348.2	344.6	336.2	325.3	322.9	332.5	337.3	341.0	344.6
52.5°	309.6	305.9	296.3	286.5	286.5	293.9	297.4	298.7	302.2
55°	275.6	272.1	262.4	255.1	252.7	258.8	261.2	261.2	263.6
57.5°	244.2	240.6	230.9	222.5	221.3	224.9	224.9	224.9	226.1
60°	214.0	210.4	200.7	193.5	191.1	192.2	191.1	189.8	191.1
62.5°	186.2	182.6	172.9	164.5	162.1	162.1	158.4	157.1	158.4
65°	160.8	154.7	147.5	139.0	134.2	130.5	125.7	125.7	125.7
67.5°	135.5	130.5	122.2	113.7	107.6	101.5	94.3	96.7	98.0
70°	112.4	108.9	99.1	90.7	82.2	75.0	68.9	71.3	72.5
72.5°	91.9	87.1	78.6	68.9	61.7	52.0	48.4	50.8	50.8
75°	71.3	66.5	59.3	49.6	41.1	32.7	32.7	33.8	33.8
77.5°	53.2	48.4	41.1	32.7	25.3	19.4	20.5	20.5	20.5
80°	36.2	32.7	26.6	19.4	13.3	10.9	10.9	10.9	12.0
82.5°	20.5	18.1	14.5	9.6	6.1	6.1	6.1	6.1	6.1
85°	9.6	7.2	6.1	3.7	2.4	2.4	2.4	2.4	2.4
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



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







(END OF REPORT)