

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P580070

Luminaire Tested: **HCC4W20D010MW-HM40525930-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580070  
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: HCC4W20D010MW-HM40525930-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

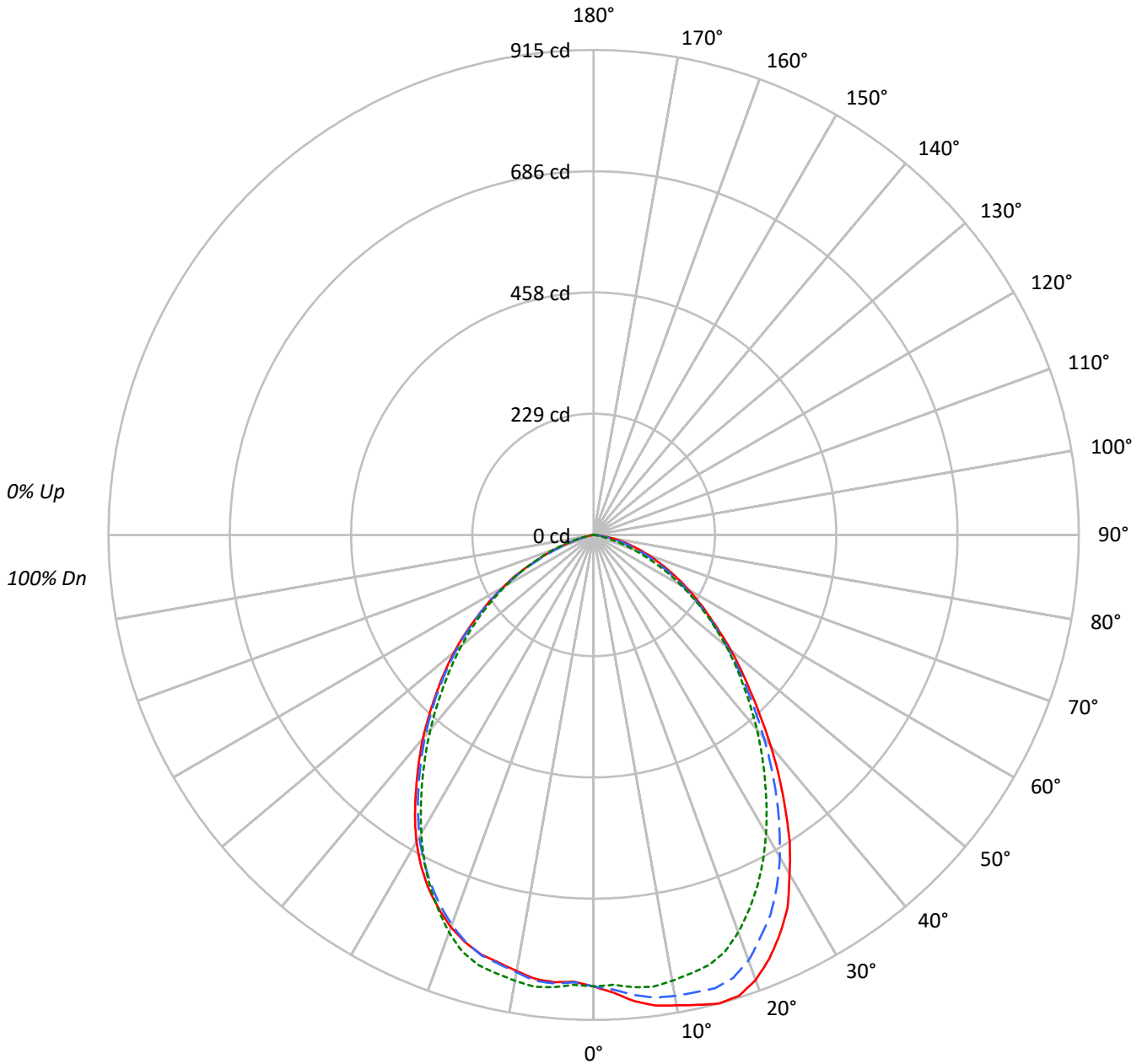
Lumens per Lamp: N/A  
Luminaire Lumens: 1775.0 lumens  
Efficiency: N/A  
Efficacy: 88.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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								
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	62	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°	105078	105078	105078
5°	109330	106049	104898
10°	112886	106987	104670
15°	116868	107304	104660
20°	117256	104707	103355
25°	113110	99487	100263
30°	105254	92620	95255
35°	94818	84760	87877
40°	83584	77111	80637
45°	73089	69461	72897
50°	64725	62499	65838
55°	56923	55202	57417
60°	50818	47143	48549
65°	44684	38292	37621
70°	39021	28202	25714
75°	32359	17014	13725
80°	24506	6535	4049
85°	11322	1557	1557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	4.6
10°-20°	239.8	13.5
20°-30°	347.3	19.6
30°-40°	366.3	20.6
40°-50°	317.1	17.9
50°-60°	234.9	13.2
60°-70°	135.4	7.6
70°-80°	47.3	2.7
80°-90°	5.0	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°	669.2	37.7
0°-40°	1035.5	58.3
0°-60°	1587.4	89.4
0°-90°	1775.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1775.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	852	852	852	852	852	
5°	883	871	856	850	847	85
15°	915	885	840	821	820	257
25°	831	790	731	726	737	380
35°	630	601	563	576	584	393
45°	419	408	398	413	418	325
55°	265	259	257	266	267	239
65°	153	144	131	124	129	153
75°	68	58	36	29	29	73
85°	8	5	1	1	1	12
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°	851.9	851.9	851.9	851.9	851.9	851.9	851.9	851.9	851.9
2.5°	864.5	862.2	858.8	854.2	849.6	846.0	844.9	843.7	843.7
5°	883.0	878.3	871.4	862.2	856.5	853.0	849.6	847.2	847.2
7.5°	895.6	891.0	880.6	867.9	859.9	853.0	848.3	844.9	844.9
10°	901.3	895.6	883.0	866.8	854.2	844.9	838.0	835.7	835.7
12.5°	908.2	901.3	884.1	863.3	847.2	835.7	828.8	826.5	826.5
15°	915.2	907.0	885.3	861.1	840.3	826.5	820.8	819.6	819.6
17.5°	911.6	901.3	876.0	847.2	824.2	810.4	804.6	804.6	805.8
20°	893.3	883.0	854.2	821.9	797.7	787.4	782.7	785.1	787.4
22.5°	865.6	853.0	821.9	790.9	765.5	756.3	756.3	759.8	763.2
25°	831.1	819.6	789.7	755.2	731.0	724.1	726.4	732.1	736.7
27.5°	792.0	779.3	748.2	716.0	691.9	688.3	694.2	702.2	704.5
30°	739.0	728.7	702.2	671.1	650.3	649.2	657.3	663.1	668.8
32.5°	688.3	676.8	651.5	621.6	606.6	607.8	617.0	623.9	627.4
35°	629.7	619.3	600.9	576.7	562.9	565.2	575.6	582.4	583.6
37.5°	574.4	567.5	549.1	530.7	520.3	524.9	534.2	542.2	542.2
40°	519.1	513.4	499.6	484.6	478.9	484.6	493.8	500.8	500.8
42.5°	466.3	462.7	451.2	440.9	437.5	445.5	453.5	459.3	458.1
45°	419.0	415.6	407.5	399.4	398.2	406.4	413.3	416.7	417.9
47.5°	376.4	374.2	367.2	361.4	361.4	369.6	375.3	378.7	379.9
50°	337.3	334.9	329.2	324.6	325.7	333.8	338.5	341.9	343.1
52.5°	298.1	297.0	292.4	286.6	290.1	295.8	301.5	303.8	305.1
55°	264.7	264.7	259.0	254.4	256.7	262.4	265.9	267.0	267.0
57.5°	234.8	233.6	226.8	222.2	223.3	229.1	231.3	232.5	232.5
60°	206.0	204.9	198.0	191.1	191.1	194.5	195.7	196.8	196.8
62.5°	178.5	177.3	169.2	163.4	161.2	160.0	160.0	162.3	166.9
65°	153.1	152.0	143.8	134.7	131.2	127.8	124.3	126.6	128.9
67.5°	130.1	127.8	119.7	111.6	103.6	97.8	92.1	95.5	100.1
70°	108.2	105.9	96.7	87.5	78.2	69.0	64.5	69.0	71.3
72.5°	87.5	85.2	75.9	66.8	55.3	46.0	44.8	46.0	47.1
75°	67.9	66.8	57.6	47.1	35.7	28.8	28.8	28.8	28.8
77.5°	50.7	48.4	39.1	29.9	20.8	16.2	14.9	14.9	14.9
80°	34.5	32.2	24.2	17.3	9.2	6.9	6.9	5.7	5.7
82.5°	19.6	18.5	12.6	6.9	3.4	2.3	2.3	2.3	2.3
85°	8.0	6.9	4.6	2.3	1.1	1.1	1.1	1.1	1.1
87.5°	1.1	1.1	1.1	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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Scaled Data Report



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

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