

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: P579985

Luminaire Tested: **HCC4S20D010MW-HM40525827-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579985  
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: HCC4S20D010MW-HM40525827-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

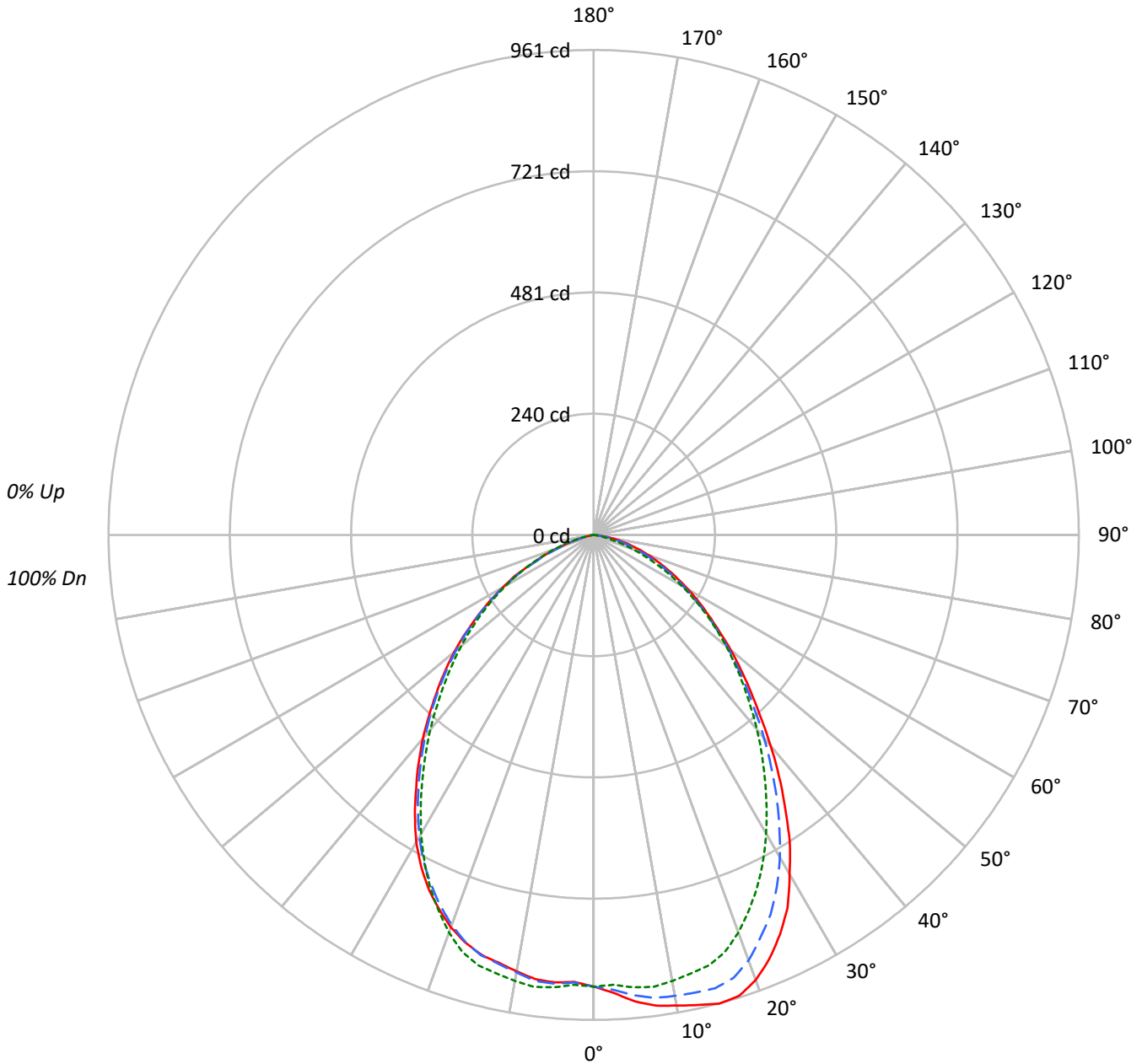
Lumens per Lamp: N/A  
Luminaire Lumens: 1864.9 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	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°	110382	110382	110382
5°	114852	111398	110209
10°	118610	112385	109968
15°	122768	112731	109960
20°	123189	110010	108580
25°	118840	104509	105339
30°	110581	97321	100084
35°	99607	89051	92334
40°	87818	81007	84695
45°	76787	72984	76578
50°	67987	65685	69158
55°	59804	57998	60342
60°	53384	49511	51016
65°	46931	40248	39547
70°	41005	29644	27048
75°	33980	17871	14440
80°	25714	6819	4333
85°	12029	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.3	4.6
10°-20°	251.9	13.5
20°-30°	364.8	19.6
30°-40°	384.9	20.6
40°-50°	333.1	17.9
50°-60°	246.7	13.2
60°-70°	142.3	7.6
70°-80°	49.7	2.7
80°-90°	5.2	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°	703.0	37.7
0°-40°	1087.9	58.3
0°-60°	1667.8	89.4
0°-90°	1864.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1864.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	895	895	895	895	895	
5°	928	916	900	892	890	89
15°	961	930	883	862	861	270
25°	873	830	768	763	774	400
35°	662	631	591	605	613	413
45°	440	428	418	434	439	342
55°	278	272	270	279	281	251
65°	161	151	138	131	136	161
75°	71	60	38	30	30	77
85°	8	5	1	1	1	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°	894.9	894.9	894.9	894.9	894.9	894.9	894.9	894.9	894.9
2.5°	908.2	905.8	902.2	897.3	892.5	888.9	887.7	886.4	886.4
5°	927.6	922.8	915.5	905.8	899.7	896.2	892.5	890.1	890.1
7.5°	940.9	936.1	925.2	911.9	903.4	896.2	891.3	887.7	887.7
10°	947.0	940.9	927.6	910.6	897.3	887.7	880.4	878.0	878.0
12.5°	954.2	947.0	928.8	907.0	890.1	878.0	870.7	868.3	868.3
15°	961.4	952.9	930.0	904.6	882.8	868.3	862.3	861.1	861.1
17.5°	957.9	947.0	920.4	890.1	865.9	851.4	845.3	845.3	846.6
20°	938.5	927.6	897.3	863.5	838.1	827.2	822.4	824.8	827.2
22.5°	909.5	896.2	863.5	830.8	804.3	794.5	794.5	798.2	801.8
25°	873.2	861.1	829.6	793.4	767.9	760.7	763.1	769.2	774.0
27.5°	832.0	818.7	786.0	752.2	726.9	723.2	729.3	737.8	740.2
30°	776.4	765.5	737.8	705.1	683.3	682.1	690.5	696.6	702.7
32.5°	723.2	711.1	684.5	653.1	637.4	638.5	648.2	655.5	659.1
35°	661.5	650.6	631.3	605.8	591.4	593.8	604.7	611.9	613.2
37.5°	603.4	596.2	576.8	557.6	546.7	551.5	561.1	569.6	569.6
40°	545.4	539.3	524.9	509.2	503.1	509.2	518.8	526.0	526.0
42.5°	489.8	486.2	474.1	463.2	459.6	468.0	476.5	482.5	481.3
45°	440.2	436.5	428.1	419.7	418.4	426.9	434.1	437.8	439.0
47.5°	395.5	393.1	385.7	379.8	379.8	388.3	394.2	397.9	399.0
50°	354.3	351.9	345.8	341.0	342.3	350.8	355.6	359.1	360.4
52.5°	313.2	312.0	307.2	301.1	304.8	310.8	316.8	319.3	320.5
55°	278.1	278.1	272.1	267.3	269.7	275.7	279.4	280.6	280.6
57.5°	246.7	245.5	238.2	233.4	234.6	240.6	243.0	244.3	244.3
60°	216.4	215.3	208.1	200.7	200.7	204.4	205.5	206.8	206.8
62.5°	187.4	186.3	177.8	171.7	169.3	168.2	168.2	170.6	175.4
65°	160.8	159.7	151.2	141.5	137.9	134.2	130.6	133.1	135.5
67.5°	136.6	134.2	125.8	117.3	108.9	102.8	96.7	100.4	105.2
70°	113.7	111.3	101.6	91.9	82.2	72.6	67.7	72.6	75.0
72.5°	91.9	89.5	79.8	70.2	58.0	48.4	47.1	48.4	49.6
75°	71.3	70.2	60.4	49.6	37.5	30.3	30.3	30.3	30.3
77.5°	53.2	50.8	41.1	31.4	21.8	17.0	15.7	15.7	15.7
80°	36.2	33.8	25.3	18.1	9.6	7.2	7.2	6.1	6.1
82.5°	20.5	19.4	13.3	7.2	3.7	2.4	2.4	2.4	2.4
85°	8.5	7.2	4.8	2.4	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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Scaled Data Report



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

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