

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: P580073

Luminaire Tested: **HCC4S20D010MB-HM40525930-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580073  
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: HCC4S20D010MB-HM40525930-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

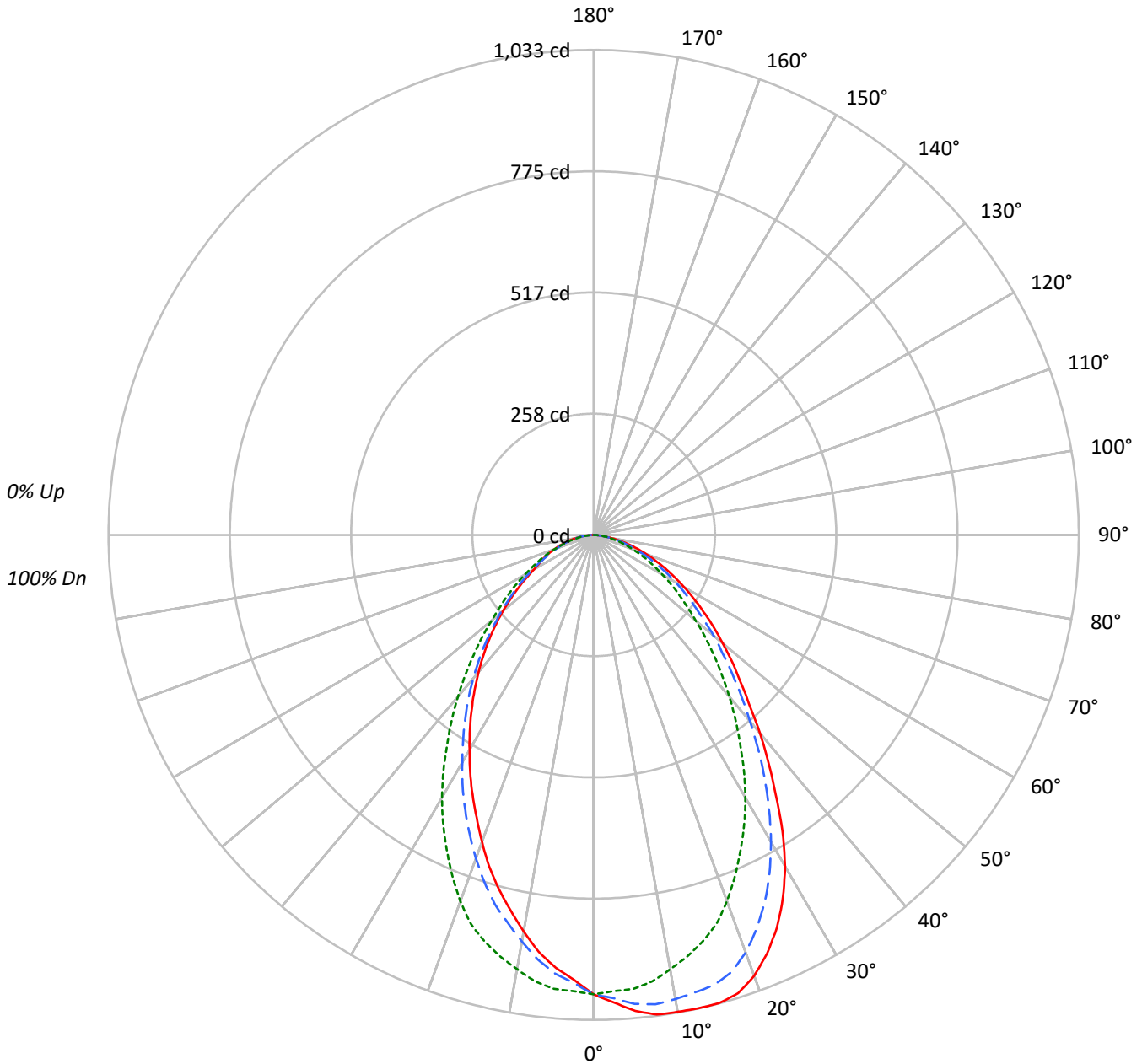
Lumens per Lamp: N/A  
Luminaire Lumens: 1747.5 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76								
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66								
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	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47								
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42								
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	120694	120694	120694
5°	125996	120164	114605
10°	129194	117658	107413
15°	131860	114518	99667
20°	131170	108960	91266
25°	125645	100752	83033
30°	116092	91994	75259
35°	101760	81809	68121
40°	88607	72280	61347
45°	77119	63059	54826
50°	68697	54344	48376
55°	61396	47783	41827
60°	54815	41740	36066
65°	48712	36629	34294
70°	42772	31556	31989
75°	36172	26879	29643
80°	27773	22872	26992
85°	16275	17832	22927



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.7	5.2
10°-20°	253.0	14.5
20°-30°	345.7	19.8
30°-40°	347.1	19.9
40°-50°	287.1	16.4
50°-60°	208.1	11.9
60°-70°	131.8	7.5
70°-80°	66.6	3.8
80°-90°	16.3	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°	690.4	39.5
0°-40°	1037.5	59.4
0°-60°	1532.7	87.7
0°-90°	1747.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	978	978	978	978	978	
5°	1018	1003	970	938	926	98
15°	1033	992	897	814	780	290
25°	923	862	740	647	610	422
35°	676	635	543	477	452	424
45°	442	417	362	326	314	344
55°	286	260	222	203	194	257
65°	167	148	126	113	118	166
75°	76	66	56	59	62	81
85°	12	12	13	15	16	16
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°	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5
2.5°	997.0	993.5	987.8	980.8	972.8	963.6	955.6	950.9	948.6
5°	1017.6	1013.0	1002.7	987.8	970.5	953.2	938.2	929.1	925.6
7.5°	1030.4	1023.5	1008.4	985.4	959.0	933.7	911.8	899.1	895.7
10°	1031.5	1023.5	1003.9	972.8	939.4	906.0	879.5	861.1	857.6
12.5°	1032.6	1022.3	998.1	961.3	919.8	878.4	846.1	824.2	818.5
15°	1032.6	1022.3	992.4	948.6	896.8	849.6	813.9	788.6	780.5
17.5°	1023.5	1011.9	976.2	925.6	869.2	816.2	774.8	748.3	740.3
20°	999.3	986.6	946.3	891.0	830.1	774.8	733.3	705.7	695.3
22.5°	964.7	949.7	907.2	847.3	786.3	729.8	689.6	660.8	651.6
25°	923.2	908.3	862.3	803.6	740.3	687.3	647.0	620.5	610.1
27.5°	872.6	856.5	811.6	752.9	694.2	641.2	604.4	580.3	569.8
30°	815.1	797.7	755.2	698.8	645.9	595.2	559.5	539.9	528.4
32.5°	748.3	733.3	695.3	644.7	595.2	546.8	517.0	499.6	490.5
35°	675.8	667.7	635.4	591.7	543.3	503.1	476.6	460.5	452.4
37.5°	611.4	603.2	575.6	538.7	496.2	459.4	437.5	423.7	416.7
40°	550.3	543.3	517.0	485.9	448.9	416.7	398.4	387.9	381.0
42.5°	490.5	487.0	465.1	436.3	404.1	376.4	361.5	353.4	347.7
45°	442.1	437.5	416.7	389.1	361.5	338.5	325.7	320.0	314.3
47.5°	399.5	393.8	371.9	347.7	322.3	301.7	290.1	284.3	282.0
50°	358.0	352.2	332.7	308.5	283.2	268.3	259.0	253.3	252.1
52.5°	321.2	315.4	293.5	270.6	251.0	238.3	230.2	224.5	222.2
55°	285.5	278.6	260.1	238.3	222.2	210.7	202.6	196.8	194.5
57.5°	253.3	246.4	230.2	209.6	194.5	184.2	177.3	171.5	169.2
60°	222.2	216.4	201.4	181.9	169.2	160.0	153.1	148.5	146.2
62.5°	193.4	188.8	173.9	156.6	146.2	138.1	132.4	127.8	130.1
65°	166.9	162.3	148.5	133.5	125.5	117.5	112.9	112.9	117.5
67.5°	141.7	137.0	125.5	112.9	105.9	100.1	96.7	100.1	103.6
70°	118.6	114.0	103.6	93.3	87.5	82.9	82.9	86.4	88.7
72.5°	96.7	92.1	84.1	75.9	71.3	67.9	71.3	73.6	75.9
75°	75.9	72.5	65.6	59.9	56.4	55.3	58.7	61.0	62.2
77.5°	56.4	54.1	49.6	44.8	42.6	43.7	47.3	48.4	49.6
80°	39.1	38.0	34.5	32.2	32.2	33.4	35.7	36.8	38.0
82.5°	24.2	24.2	21.9	20.8	21.9	24.2	25.3	26.5	26.5
85°	11.5	12.6	11.5	11.5	12.6	14.9	14.9	16.2	16.2
87.5°	3.4	3.4	4.6	4.6	5.7	5.7	5.7	5.7	6.9
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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