

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: P580052

Luminaire Tested: **HCC4S20D010MW-HM40525927-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580052  
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-HM40525927-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

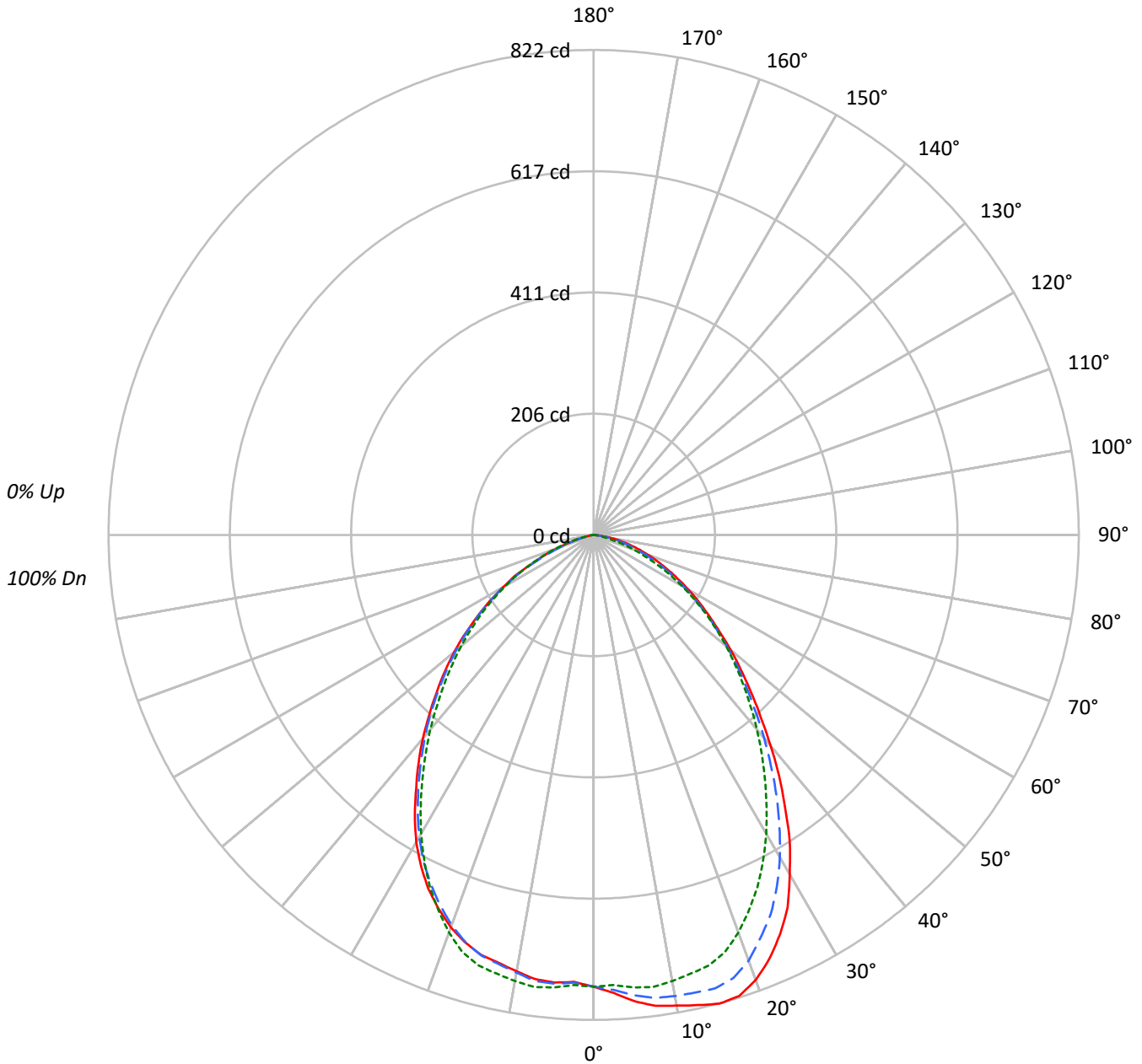
Lumens per Lamp: N/A  
Luminaire Lumens: 1595.5 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P580052  
CATALOG NUMBER: HCC4S20D010MW-HM40525927-41RWWC

### Luminous Intensity Polar Plot





TEST NUMBER: P580052

CATALOG NUMBER: HCC4S20D010MW-HM40525927-41RWWC

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

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

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

	0°	90°	180°
0°	94433	94433	94433
5°	98261	95314	94286
10°	101464	96153	94087
15°	105031	96449	94074
20°	105390	94115	92894
25°	101664	89416	90123
30°	94600	83263	85613
35°	85212	76177	78978
40°	75130	69318	72473
45°	65693	62448	65501
50°	58182	56186	59160
55°	51181	49633	51633
60°	45687	42357	43664
65°	40160	34410	33797
70°	35090	25353	23117
75°	29071	15298	12343
80°	22091	5896	3694
85°	10190	1415	1415



TEST NUMBER: P580052  
 CATALOG NUMBER: HCC4S20D010MW-HM40525927-41RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.8	4.6
10°-20°	215.5	13.5
20°-30°	312.1	19.6
30°-40°	329.3	20.6
40°-50°	285.0	17.9
50°-60°	211.1	13.2
60°-70°	121.7	7.6
70°-80°	42.5	2.7
80°-90°	4.5	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°	601.5	37.7
0°-40°	930.7	58.3
0°-60°	1426.8	89.4
0°-90°	1595.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1595.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	766	766	766	766	766	
5°	794	783	770	764	762	76
15°	822	796	755	738	737	231
25°	747	710	657	653	662	342
35°	566	540	506	517	524	353
45°	377	366	358	371	376	292
55°	238	233	231	239	240	215
65°	138	129	118	112	116	137
75°	61	52	32	26	26	66
85°	7	4	1	1	1	11
90°	0	0	0	0	0	



TEST NUMBER: P580052

CATALOG NUMBER: HCC4S20D010MW-HM40525927-41RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	765.6	765.6	765.6	765.6	765.6	765.6	765.6	765.6	765.6
2.5°	777.0	774.9	771.8	767.7	763.6	760.5	759.4	758.4	758.4
5°	793.6	789.5	783.3	774.9	769.8	766.7	763.6	761.5	761.5
7.5°	805.0	800.8	791.5	780.1	772.8	766.7	762.5	759.4	759.4
10°	810.1	805.0	793.6	779.0	767.7	759.4	753.2	751.2	751.2
12.5°	816.3	810.1	794.6	775.9	761.5	751.2	745.0	742.9	742.9
15°	822.5	815.3	795.7	773.9	755.3	742.9	737.8	736.7	736.7
17.5°	819.4	810.1	787.4	761.5	740.8	728.3	723.2	723.2	724.2
20°	802.9	793.6	767.7	738.8	717.0	707.7	703.6	705.6	707.7
22.5°	778.0	766.7	738.8	710.8	688.1	679.7	679.7	682.9	686.0
25°	747.0	736.7	709.8	678.7	657.0	650.8	652.9	658.0	662.2
27.5°	711.8	700.5	672.5	643.6	621.8	618.7	623.9	631.2	633.3
30°	664.2	654.9	631.2	603.2	584.6	583.6	590.8	596.0	601.1
32.5°	618.7	608.4	585.7	558.7	545.3	546.3	554.6	560.8	563.9
35°	565.9	556.6	540.1	518.3	505.9	508.0	517.3	523.5	524.5
37.5°	516.3	510.1	493.6	476.9	467.6	471.8	480.1	487.4	487.4
40°	466.6	461.4	449.1	435.6	430.5	435.6	443.9	450.1	450.1
42.5°	419.0	415.9	405.6	396.3	393.2	400.4	407.6	412.8	411.8
45°	376.6	373.5	366.2	359.0	358.0	365.2	371.4	374.5	375.5
47.5°	338.4	336.3	330.1	324.8	324.8	332.2	337.3	340.4	341.5
50°	303.2	301.1	295.9	291.8	292.8	300.1	304.2	307.3	308.3
52.5°	267.9	266.9	262.8	257.6	260.7	265.9	271.0	273.1	274.1
55°	238.0	238.0	232.8	228.7	230.8	235.9	239.0	240.1	240.1
57.5°	211.0	210.0	203.8	199.7	200.7	205.9	208.0	209.0	209.0
60°	185.2	184.2	178.0	171.7	171.7	174.8	175.8	177.0	177.0
62.5°	160.4	159.3	152.1	146.9	144.9	143.8	143.8	145.9	150.0
65°	137.6	136.6	129.4	121.0	117.9	114.8	111.7	113.8	115.8
67.5°	116.9	114.8	107.6	100.4	93.1	88.0	82.8	85.9	90.0
70°	97.3	95.2	86.9	78.7	70.3	62.1	57.9	62.1	64.1
72.5°	78.7	76.6	68.2	60.0	49.7	41.4	40.4	41.4	42.4
75°	61.0	60.0	51.7	42.4	32.1	25.9	25.9	25.9	25.9
77.5°	45.5	43.5	35.2	27.0	18.6	14.5	13.4	13.4	13.4
80°	31.1	29.0	21.7	15.5	8.3	6.2	6.2	5.2	5.2
82.5°	17.5	16.5	11.4	6.2	3.1	2.1	2.1	2.1	2.1
85°	7.2	6.2	4.1	2.1	1.0	1.0	1.0	1.0	1.0
87.5°	1.0	1.0	1.0	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

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report





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

Scaled Data Report



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

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



(END OF REPORT)