

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: **HCC4S20D010MB-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: HCC4S20D010MB-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**

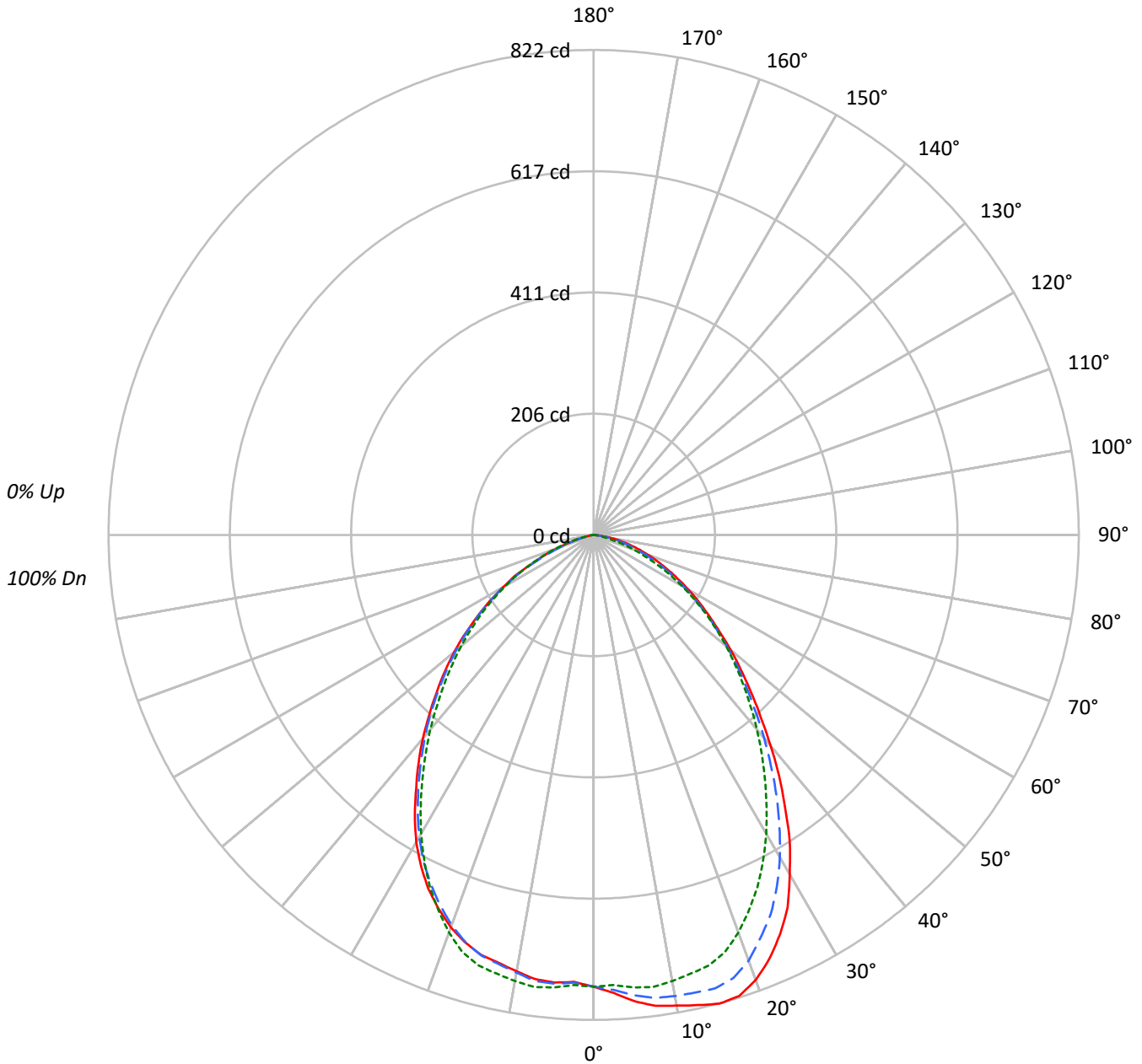
Lumens per Lamp: N/A  
Luminaire Lumens: 1595.5 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



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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°	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



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**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	

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**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

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Scaled Data Report



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

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