

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838574

Luminaire Tested: HCSQ640D010-HM63040827-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838574
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040827-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

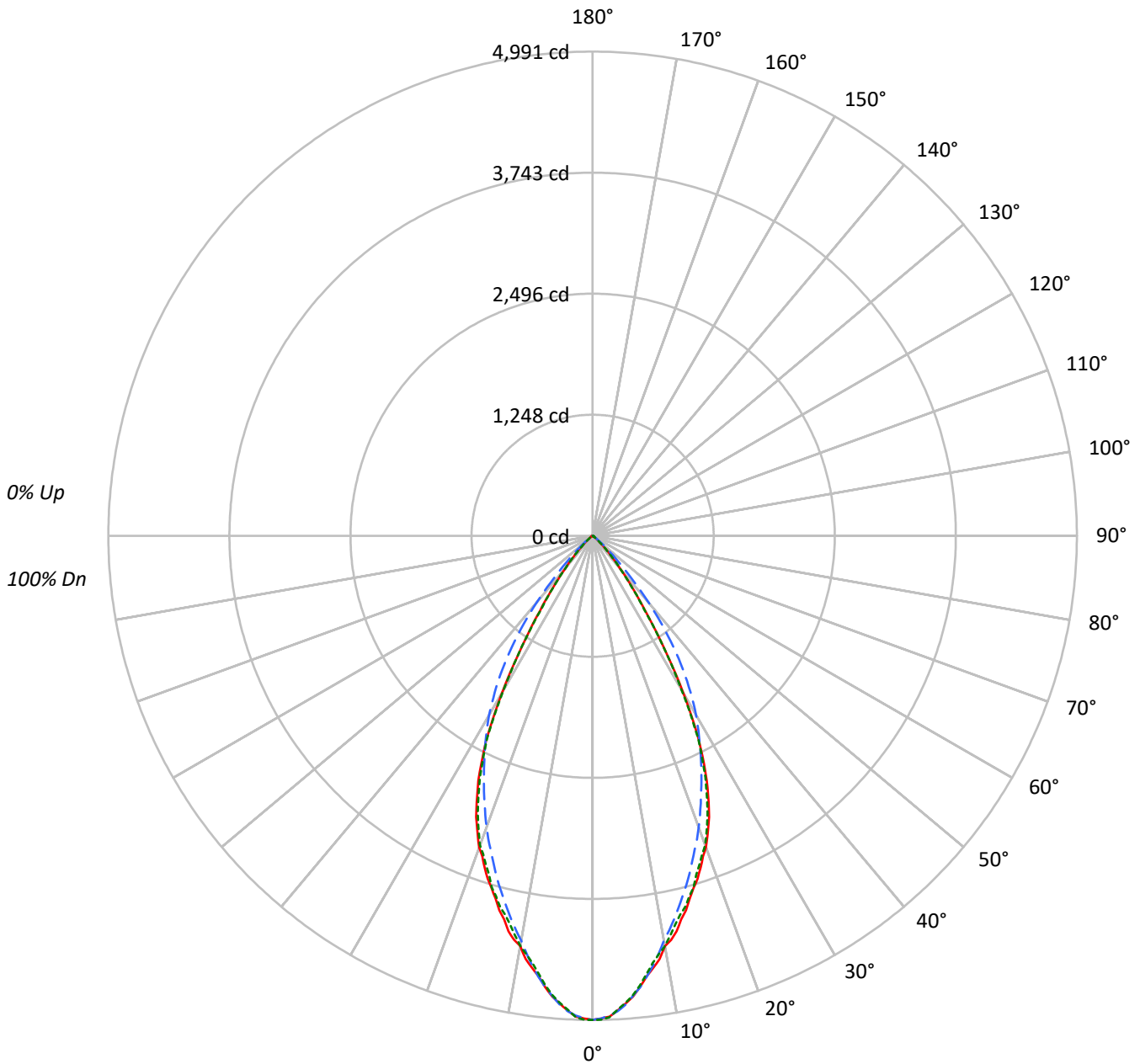
Lumens per Lamp: N/A
Luminaire Lumens: 3738.6 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): 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: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	214899	214899	214899
5°	206138	205780	205490
10°	187751	185202	187606
15°	172548	166232	171505
20°	156586	146506	155518
25°	132339	125926	130520
30°	92661	106005	91085
35°	49770	81318	48808
40°	24640	50315	24455
45°	10759	21214	10558
50°	3463	7703	3463
55°	1749	2500	1629
60°	1145	1145	1145
65°	846	846	846
70°	629	629	629
75°	549	549	549
80°	422	422	422
85°	840	840	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 21214 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.3	11.7
10°-20°	1058.4	28.3
20°-30°	1222.6	32.7
30°-40°	763.5	20.4
40°-50°	212.1	5.7
50°-60°	29.7	0.8
60°-70°	8.7	0.2
70°-80°	3.7	0.1
80°-90°	1.6	0.0
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°	2719.2	72.7
0°-40°	3482.7	93.2
0°-60°	3724.5	99.6
0°-90°	3738.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3738.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4991	4991	4991	4991	4991	
5°	4770	4756	4761	4754	4754	440
15°	3871	3798	3729	3788	3848	1084
25°	2786	2704	2651	2702	2747	1244
35°	947	1169	1547	1155	929	629
45°	177	225	348	223	173	153
55°	23	23	33	23	22	23
65°	8	8	8	8	8	9
75°	3	3	3	3	3	3
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4991.2	4991.2	4991.2	4991.2	4991.2
1°	4976.2	4976.2	4976.2	4989.6	4989.6
2°	4961.2	4957.9	4949.6	4959.6	4964.6
3°	4899.6	4906.2	4909.6	4904.6	4892.9
4°	4836.2	4829.5	4847.9	4836.2	4826.2
5°	4769.5	4756.2	4761.2	4754.5	4754.5
6°	4676.2	4692.8	4679.5	4667.8	4661.2
7°	4574.5	4587.8	4579.5	4562.8	4551.1
8°	4494.5	4486.1	4472.8	4469.5	4449.4
9°	4417.8	4387.8	4357.8	4362.8	4367.8
10°	4294.4	4297.7	4236.1	4282.7	4291.1
11°	4242.7	4224.4	4142.7	4181.0	4194.4
12°	4167.7	4109.4	4039.3	4071.0	4096.0
13°	4059.3	3999.3	3936.0	3984.3	4009.3
14°	3977.7	3909.3	3829.3	3891.0	3942.7
15°	3871.0	3797.6	3729.3	3787.6	3847.6
16°	3777.6	3692.6	3624.2	3680.9	3770.9
17°	3695.9	3590.9	3507.5	3567.6	3654.2
18°	3600.9	3479.2	3402.5	3465.9	3564.2
19°	3495.9	3372.5	3304.2	3355.8	3469.2
20°	3417.5	3279.2	3197.5	3247.5	3394.2
22.5°	3137.5	2992.4	2917.4	2977.4	3094.1
25°	2785.7	2704.0	2650.7	2702.3	2747.4
27.5°	2368.9	2368.9	2387.3	2365.6	2352.3
30°	1863.8	1998.8	2132.2	1992.2	1832.1
32.5°	1360.3	1577.1	1845.5	1605.4	1358.7
35°	946.9	1168.6	1547.1	1155.3	928.6
37.5°	658.5	805.2	1220.3	813.5	650.2
40°	438.4	540.1	895.2	550.1	435.1
42.5°	286.7	356.8	578.5	358.4	280.1
45°	176.7	225.1	348.4	223.4	173.4
47.5°	103.4	133.4	203.4	135.0	101.7
50°	51.7	78.4	115.0	76.7	51.7
52.5°	30.0	41.7	63.3	40.0	30.0
55°	23.3	23.3	33.3	23.3	21.7
57.5°	18.3	18.3	18.3	18.3	16.7
60°	13.3	15.0	13.3	13.3	13.3
62.5°	11.7	11.7	10.0	11.7	10.0
65°	8.3	8.3	8.3	8.3	8.3
67.5°	6.7	6.7	6.7	6.7	6.7
70°	5.0	5.0	5.0	5.0	5.0
72.5°	3.3	5.0	3.3	5.0	5.0
75°	3.3	3.3	3.3	3.3	3.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	1.7	1.7
87.5°	1.7	1.7	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



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Scaled Data Report





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

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77.5°	3.3	3.3	3.3	3.3	1.7
80°	1.7	1.7	1.7	1.7	1.7

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Scaled Data Report



(END OF REPORT)