

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: P838634

Luminaire Tested: HCSQ645D010-HM64560927-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838634
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: HCSQ645D010-HM64560927-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

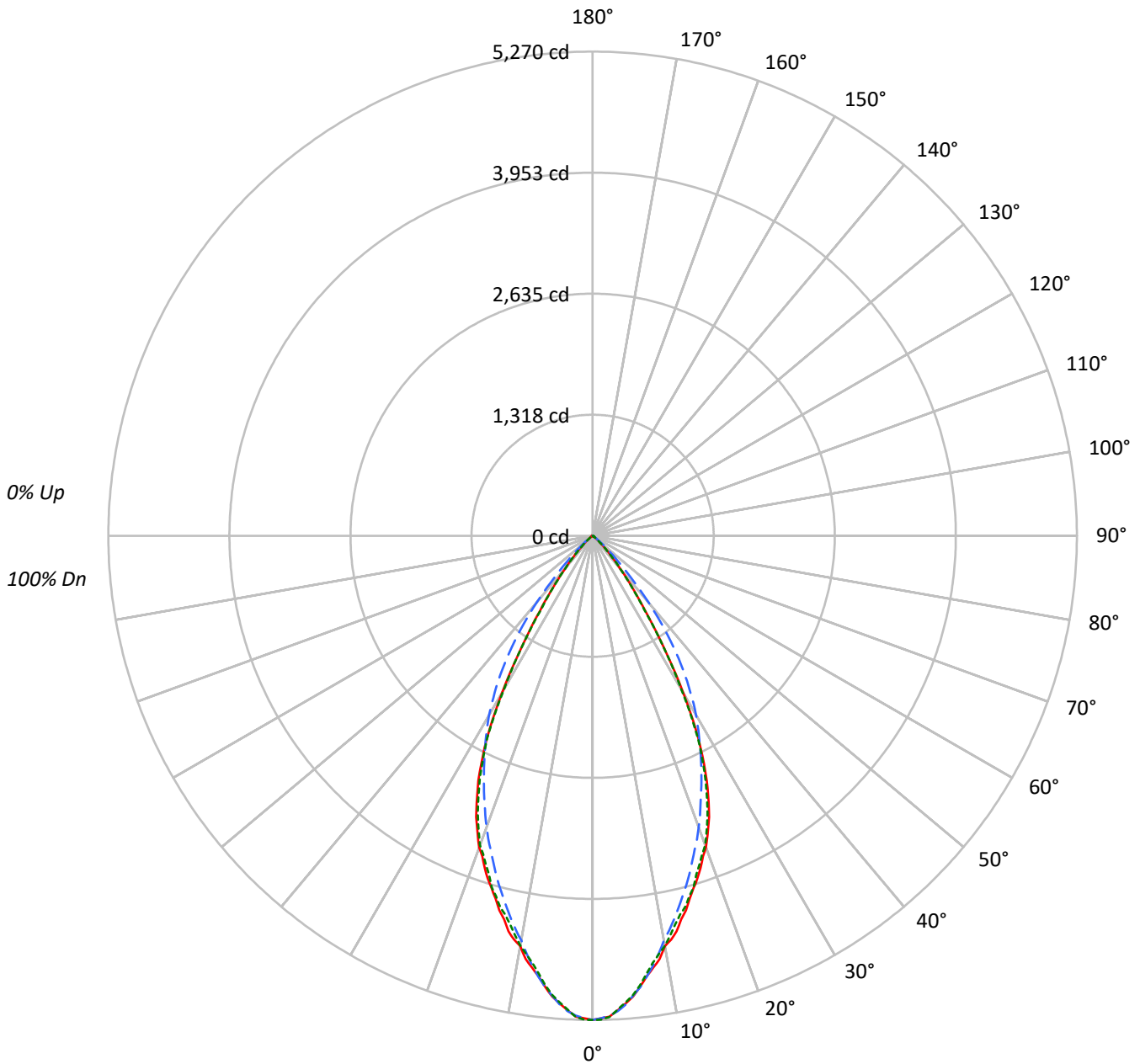
Lumens per Lamp: N/A
Luminaire Lumens: 3947.3 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 45.9
Input Voltage (V): NR
Input Current (Ain): 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

TEST NUMBER: P838634

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQC

Luminous Intensity Polar Plot





TEST NUMBER: P838634

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQC

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	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°	226895	226895	226895
5°	217644	217263	216961
10°	198230	195537	198077
15°	182176	175508	181079
20°	165328	154680	164197
25°	139727	132952	137803
30°	97832	111922	96171
35°	52551	85854	51531
40°	26017	53125	25821
45°	11362	22401	11149
50°	3657	8132	3657
55°	1847	2642	1719
60°	1214	1214	1214
65°	897	897	897
70°	667	667	667
75°	582	582	582
80°	446	446	446
85°	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22401 cd/sqm



TEST NUMBER: P838634

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	462.8	11.7
10°-20°	1117.4	28.3
20°-30°	1290.8	32.7
30°-40°	806.1	20.4
40°-50°	224.0	5.7
50°-60°	31.3	0.8
60°-70°	9.2	0.2
70°-80°	3.9	0.1
80°-90°	1.7	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°	2871.0	72.7
0°-40°	3677.1	93.2
0°-60°	3932.4	99.6
0°-90°	3947.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3947.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5270	5270	5270	5270	5270	
5°	5036	5022	5027	5020	5020	464
15°	4087	4010	3937	3999	4062	1145
25°	2941	2855	2799	2853	2901	1314
35°	1000	1234	1633	1220	980	664
45°	187	238	368	236	183	162
55°	25	25	35	25	23	24
65°	9	9	9	9	9	9
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



TEST NUMBER: P838634

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQC

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5269.8	5269.8	5269.8	5269.8	5269.8
1°	5254.0	5254.0	5254.0	5268.1	5268.1
2°	5238.1	5234.6	5225.8	5236.4	5241.6
3°	5173.0	5180.0	5183.6	5178.3	5166.0
4°	5106.1	5099.1	5118.4	5106.1	5095.6
5°	5035.7	5021.6	5026.9	5019.9	5019.9
6°	4937.1	4954.7	4940.7	4928.3	4921.3
7°	4829.8	4843.9	4835.1	4817.5	4805.1
8°	4745.3	4736.5	4722.4	4718.9	4697.8
9°	4664.3	4632.6	4601.0	4606.2	4611.5
10°	4534.1	4537.6	4472.5	4521.8	4530.6
11°	4479.5	4460.2	4373.9	4414.4	4428.5
12°	4400.3	4338.7	4264.8	4298.2	4324.6
13°	4285.9	4222.5	4155.7	4206.7	4233.1
14°	4199.7	4127.5	4043.0	4108.1	4162.7
15°	4087.0	4009.6	3937.4	3999.0	4062.4
16°	3988.4	3898.7	3826.5	3886.4	3981.4
17°	3902.2	3791.3	3703.3	3766.7	3858.2
18°	3801.9	3673.4	3592.4	3659.3	3763.1
19°	3691.0	3560.7	3488.6	3543.1	3662.8
20°	3608.3	3462.2	3375.9	3428.7	3583.6
22.5°	3312.6	3159.4	3080.2	3143.6	3266.8
25°	2941.2	2854.9	2798.6	2853.2	2900.7
27.5°	2501.1	2501.1	2520.5	2497.6	2483.5
30°	1967.8	2110.4	2251.2	2103.3	1934.4
32.5°	1436.3	1665.1	1948.5	1695.0	1434.5
35°	999.8	1233.8	1633.4	1219.8	980.4
37.5°	695.2	850.1	1288.4	858.9	686.4
40°	462.9	570.3	945.2	580.8	459.4
42.5°	302.7	376.7	610.8	378.4	295.7
45°	186.6	237.6	367.9	235.9	183.1
47.5°	109.1	140.8	214.7	142.6	107.4
50°	54.6	82.7	121.4	81.0	54.6
52.5°	31.7	44.0	66.9	42.2	31.7
55°	24.6	24.6	35.2	24.6	22.9
57.5°	19.4	19.4	19.4	19.4	17.6
60°	14.1	15.8	14.1	14.1	14.1
62.5°	12.3	12.3	10.6	12.3	10.6
65°	8.8	8.8	8.8	8.8	8.8
67.5°	7.0	7.0	7.0	7.0	7.0
70°	5.3	5.3	5.3	5.3	5.3
72.5°	3.5	5.3	3.5	5.3	5.3
75°	3.5	3.5	3.5	3.5	3.5



TEST NUMBER: P838634

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQC

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.8	1.8	1.8	1.8	1.8
85°	1.8	1.8	1.8	1.8	1.8
87.5°	1.8	1.8	1.8	1.8	1.8
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report





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

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



77.5°	3.5	3.5	3.5	3.5	1.8
80°	1.8	1.8	1.8	1.8	1.8

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

Scaled Data Report



(END OF REPORT)