

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: P838654

Luminaire Tested: HCSQ650D010-HM64560827-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838654
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: HCSQ650D010-HM64560827-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

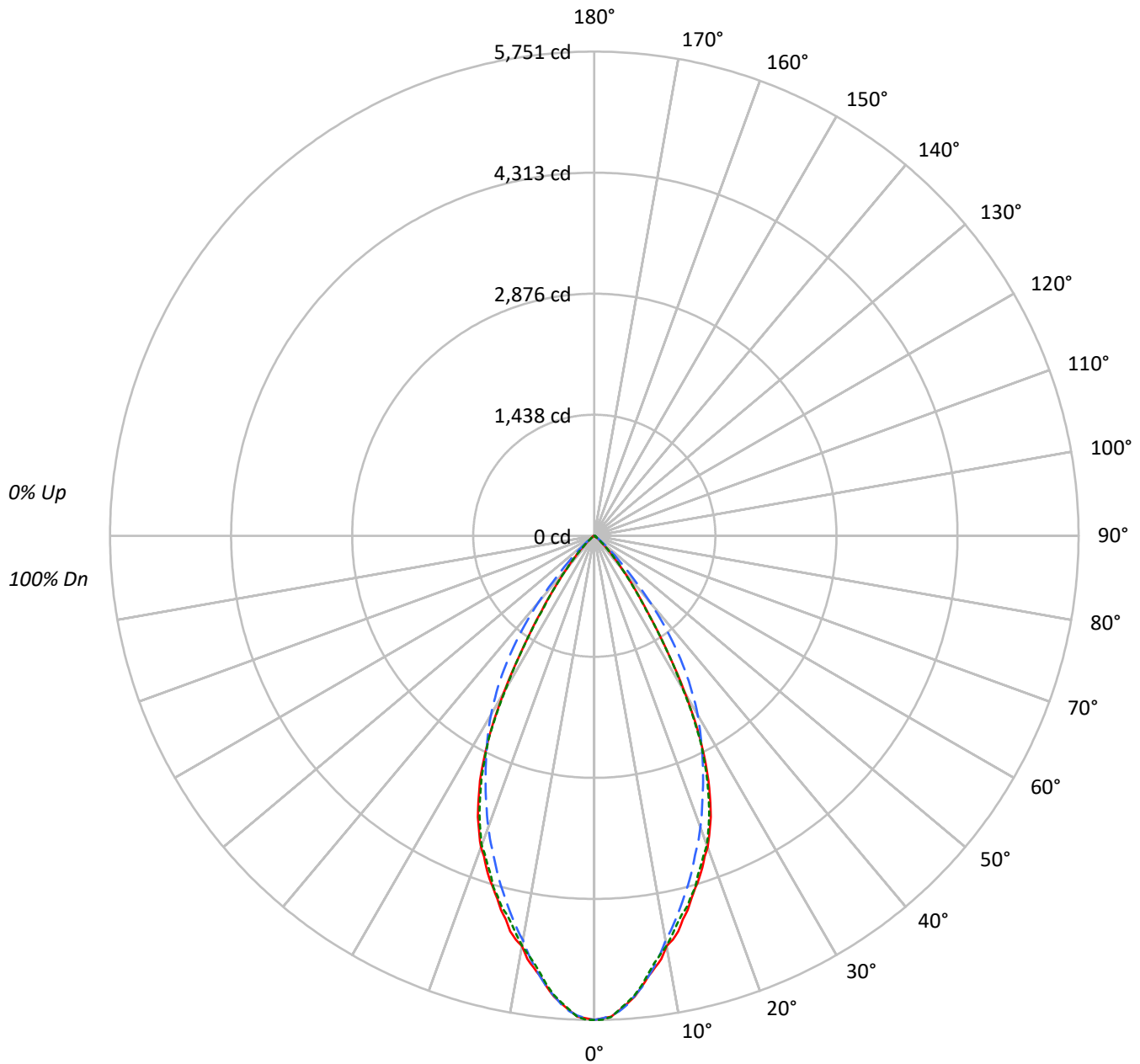
Lumens per Lamp: N/A
Luminaire Lumens: 4307.3 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 49.7
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: P838654

CATALOG NUMBER: HCSQ650D010-HM64560827-61SQC

Luminous Intensity Polar Plot



TEST NUMBER: P838654

CATALOG NUMBER: HCSQ650D010-HM64560827-61SQC

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	114	111	108	106	111	109	107	105		105	103	101			101	100	98			98
2	108	103	99	96	106	102	98	95		98	95	93			95	93	91			93
3	103	97	92	88	101	95	91	87		93	89	86			90	87	84			88
4	98	90	85	81	96	89	84	80		87	83	79			85	81	78			83
5	93	85	79	75	91	84	78	74		82	77	74			80	76	73			79
6	88	80	74	70	87	79	73	69		77	72	69			76	72	68			75
7	84	75	69	65	83	74	69	65		73	68	64			72	67	64			71
8	80	71	65	61	79	70	65	61		69	64	60			68	64	60			67
9	76	67	61	57	75	66	61	57		65	60	57			65	60	57			64
10	73	63	58	54	72	63	57	54		62	57	54			61	57	53			61

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	247596	247596	247596
5°	237503	237088	236756
10°	216317	213375	216147
15°	198798	191519	197599
20°	180412	168792	179179
25°	152473	145081	150373
30°	106761	122133	104946
35°	57344	93685	56230
40°	28389	57970	28176
45°	12397	24441	12166
50°	3985	8875	3985
55°	2019	2883	1877
60°	1326	1326	1326
65°	978	978	978
70°	730	730	730
75°	632	632	632
80°	471	471	471
85°	939	939	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 24441 cd/sqm



TEST NUMBER: P838654

CATALOG NUMBER: HCSQ650D010-HM64560827-61SQC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	505.0	11.7
10°-20°	1219.4	28.3
20°-30°	1408.6	32.7
30°-40°	879.7	20.4
40°-50°	244.4	5.7
50°-60°	34.2	0.8
60°-70°	10.1	0.2
70°-80°	4.3	0.1
80°-90°	1.8	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°	3132.9	72.7
0°-40°	4012.6	93.2
0°-60°	4291.2	99.6
0°-90°	4307.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4307.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5751	5751	5751	5751	5751	
5°	5495	5480	5486	5478	5478	506
15°	4460	4375	4297	4364	4433	1249
25°	3210	3115	3054	3114	3165	1433
35°	1091	1346	1782	1331	1070	725
45°	204	259	401	257	200	176
55°	27	27	38	27	25	27
65°	10	10	10	10	10	10
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	

TEST NUMBER: P838654

CATALOG NUMBER: HCSQ650D010-HM64560827-61SQC

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5750.6	5750.6	5750.6	5750.6	5750.6
1°	5733.3	5733.3	5733.3	5748.7	5748.7
2°	5716.0	5712.2	5702.6	5714.1	5719.9
3°	5645.0	5652.7	5656.5	5650.7	5637.3
4°	5572.0	5564.3	5585.4	5572.0	5560.5
5°	5495.2	5479.8	5485.6	5477.9	5477.9
6°	5387.6	5406.8	5391.4	5378.0	5370.3
7°	5270.4	5285.8	5276.2	5257.0	5243.6
8°	5178.2	5168.6	5153.3	5149.4	5126.4
9°	5089.9	5055.3	5020.7	5026.5	5032.3
10°	4947.8	4951.6	4880.5	4934.3	4943.9
11°	4888.2	4867.1	4773.0	4817.2	4832.5
12°	4801.8	4734.6	4653.9	4690.4	4719.2
13°	4676.9	4607.8	4534.8	4590.5	4619.3
14°	4582.8	4504.1	4411.9	4482.9	4542.5
15°	4459.9	4375.4	4296.6	4363.9	4433.0
16°	4352.3	4254.4	4175.6	4240.9	4344.7
17°	4258.2	4137.2	4041.2	4110.3	4210.2
18°	4148.7	4008.5	3920.2	3993.2	4106.5
19°	4027.7	3885.6	3806.9	3866.4	3997.0
20°	3937.5	3778.0	3683.9	3741.6	3910.6
22.5°	3614.8	3447.7	3361.3	3430.4	3564.8
25°	3209.5	3115.4	3053.9	3113.5	3165.3
27.5°	2729.3	2729.3	2750.5	2725.5	2710.1
30°	2147.4	2302.9	2456.6	2295.3	2110.9
32.5°	1567.3	1817.0	2126.2	1849.6	1565.4
35°	1091.0	1346.4	1782.4	1331.1	1069.8
37.5°	758.7	927.7	1406.0	937.3	749.1
40°	505.1	622.3	1031.4	633.8	501.3
42.5°	330.4	411.0	666.5	413.0	322.7
45°	203.6	259.3	401.4	257.4	199.8
47.5°	119.1	153.7	234.3	155.6	117.2
50°	59.5	90.3	132.5	88.4	59.5
52.5°	34.6	48.0	73.0	46.1	34.6
55°	26.9	26.9	38.4	26.9	25.0
57.5°	21.1	21.1	21.1	21.1	19.2
60°	15.4	17.3	15.4	15.4	15.4
62.5°	13.4	13.4	11.5	13.4	11.5
65°	9.6	9.6	9.6	9.6	9.6
67.5°	7.7	7.7	7.7	7.7	7.7
70°	5.8	5.8	5.8	5.8	5.8
72.5°	3.8	5.8	3.8	5.8	5.8
75°	3.8	3.8	3.8	3.8	3.8



TEST NUMBER: P838654

CATALOG NUMBER: HCSQ650D010-HM64560827-61SQC

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







77.5°	3.8	3.8	3.8	3.8	1.9
80°	1.9	1.9	1.9	1.9	1.9



(END OF REPORT)