

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: P838689

Luminaire Tested: HCSQ650D010-HM64560940-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838689
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-HM64560940-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

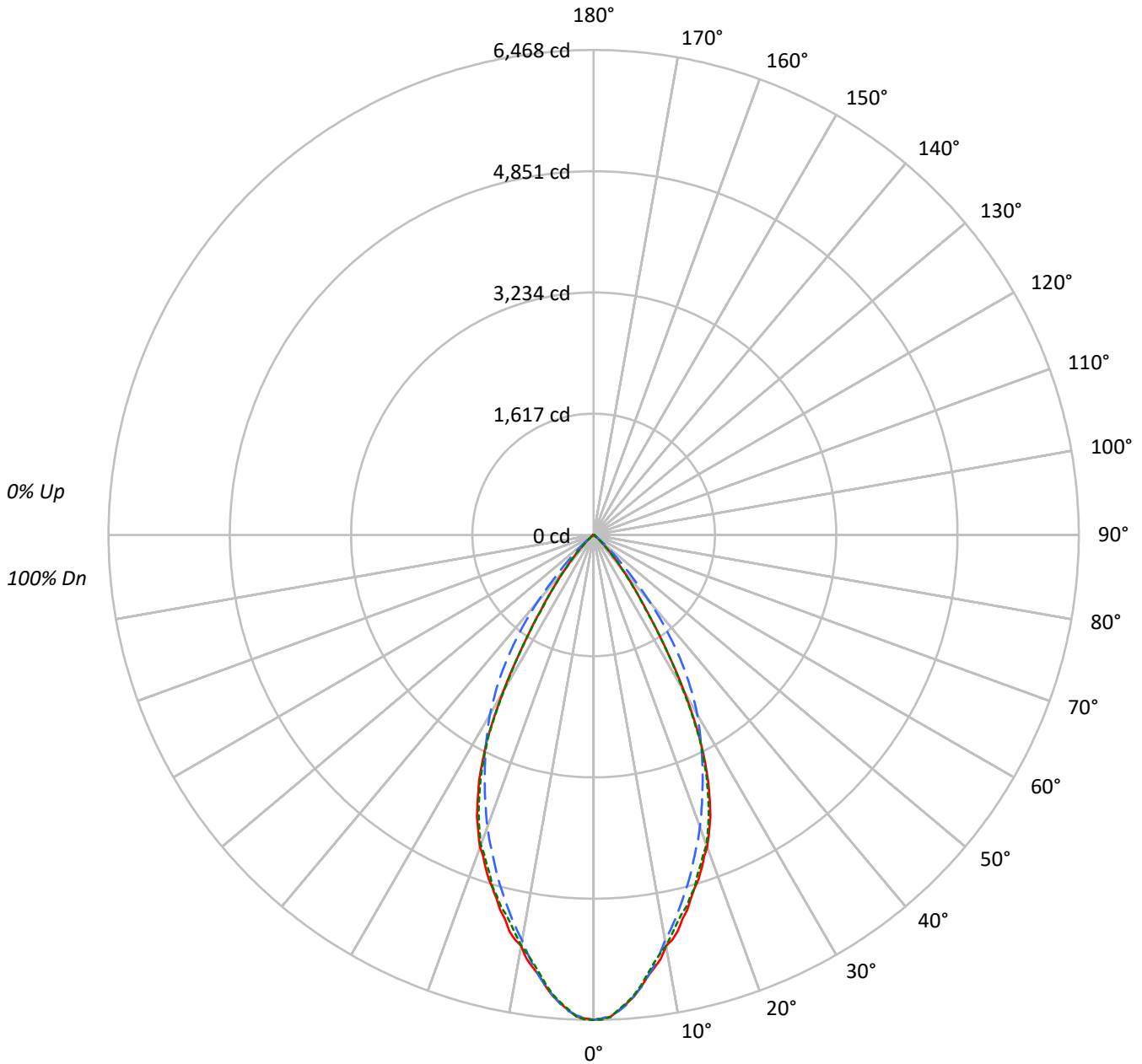
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4845.0 lumens
Efficiency: N/A
Efficacy: 97.5 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 (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°	278497	278497	278497
5°	267144	266677	266301
10°	243310	240005	243122
15°	223608	215424	222262
20°	202927	189860	201539
25°	171504	163190	169143
30°	120085	137376	118042
35°	64498	105380	63252
40°	31936	65204	31694
45°	13944	27492	13682
50°	4488	9987	4488
55°	2267	3243	2109
60°	1490	1490	1490
65°	1100	1100	1100
70°	818	818	818
75°	715	715	715
80°	545	545	545
85°	1087	1087	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 27492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	568.0	11.7
10°-20°	1371.6	28.3
20°-30°	1584.4	32.7
30°-40°	989.4	20.4
40°-50°	274.9	5.7
50°-60°	38.5	0.8
60°-70°	11.3	0.2
70°-80°	4.8	0.1
80°-90°	2.1	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°	3523.9	72.7
0°-40°	4513.4	93.2
0°-60°	4826.7	99.6
0°-90°	4845.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4845.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6468	6468	6468	6468	6468	
5°	6181	6164	6170	6162	6162	570
15°	5016	4921	4833	4908	4986	1405
25°	3610	3504	3435	3502	3560	1612
35°	1227	1514	2005	1497	1203	815
45°	229	292	452	290	225	198
55°	30	30	43	30	28	30
65°	11	11	11	11	11	11
75°	4	4	4	4	4	5
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°	6468.3	6468.3	6468.3	6468.3	6468.3
1°	6448.9	6448.9	6448.9	6466.1	6466.1
2°	6429.4	6425.1	6414.3	6427.3	6433.7
3°	6349.5	6358.1	6362.4	6356.0	6340.8
4°	6267.4	6258.7	6282.5	6267.4	6254.4
5°	6181.0	6163.7	6170.2	6161.5	6161.5
6°	6060.0	6081.6	6064.3	6049.2	6040.5
7°	5928.2	5945.5	5934.7	5913.1	5898.0
8°	5824.5	5813.7	5796.4	5792.1	5766.2
9°	5725.1	5686.2	5647.3	5653.8	5660.3
10°	5565.2	5569.6	5489.6	5550.1	5560.9
11°	5498.3	5474.5	5368.7	5418.3	5435.6
12°	5401.1	5325.4	5234.7	5275.8	5308.2
13°	5260.6	5182.9	5100.8	5163.4	5195.8
14°	5154.8	5066.2	4962.5	5042.4	5109.4
15°	5016.5	4921.4	4832.9	4908.5	4986.3
16°	4895.5	4785.3	4696.8	4770.2	4886.9
17°	4789.7	4653.6	4545.5	4623.3	4735.6
18°	4666.5	4508.8	4409.4	4491.5	4619.0
19°	4530.4	4370.5	4282.0	4348.9	4495.8
20°	4428.9	4249.6	4143.7	4208.5	4398.6
22.5°	4065.9	3878.0	3780.7	3858.5	4009.7
25°	3610.1	3504.2	3435.1	3502.0	3560.4
27.5°	3070.0	3070.0	3093.7	3065.6	3048.4
30°	2415.4	2590.3	2763.2	2581.7	2374.3
32.5°	1762.9	2043.8	2391.6	2080.5	1760.7
35°	1227.1	1514.5	2004.9	1497.2	1203.4
37.5°	853.4	1043.5	1581.4	1054.3	842.6
40°	568.2	700.0	1160.1	712.9	563.9
42.5°	371.6	462.3	749.7	464.5	363.0
45°	229.0	291.7	451.5	289.5	224.7
47.5°	133.9	172.8	263.6	175.0	131.8
50°	67.0	101.5	149.1	99.4	67.0
52.5°	38.9	54.0	82.1	51.9	38.9
55°	30.2	30.2	43.2	30.2	28.1
57.5°	23.8	23.8	23.8	23.8	21.6
60°	17.3	19.4	17.3	17.3	17.3
62.5°	15.1	15.1	13.0	15.1	13.0
65°	10.8	10.8	10.8	10.8	10.8
67.5°	8.6	8.6	8.6	8.6	8.6
70°	6.5	6.5	6.5	6.5	6.5
72.5°	4.3	6.5	4.3	6.5	6.5
75°	4.3	4.3	4.3	4.3	4.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	2.2	2.2	2.2	2.2	2.2
85°	2.2	2.2	2.2	2.2	2.2
87.5°	2.2	2.2	2.2	2.2	2.2
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°	4.3	4.3	4.3	4.3	2.2
80°	2.2	2.2	2.2	2.2	2.2

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