

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: P838673

Luminaire Tested: HCSQ650D010-HM64560840-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838673
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ650D010-HM64560840-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

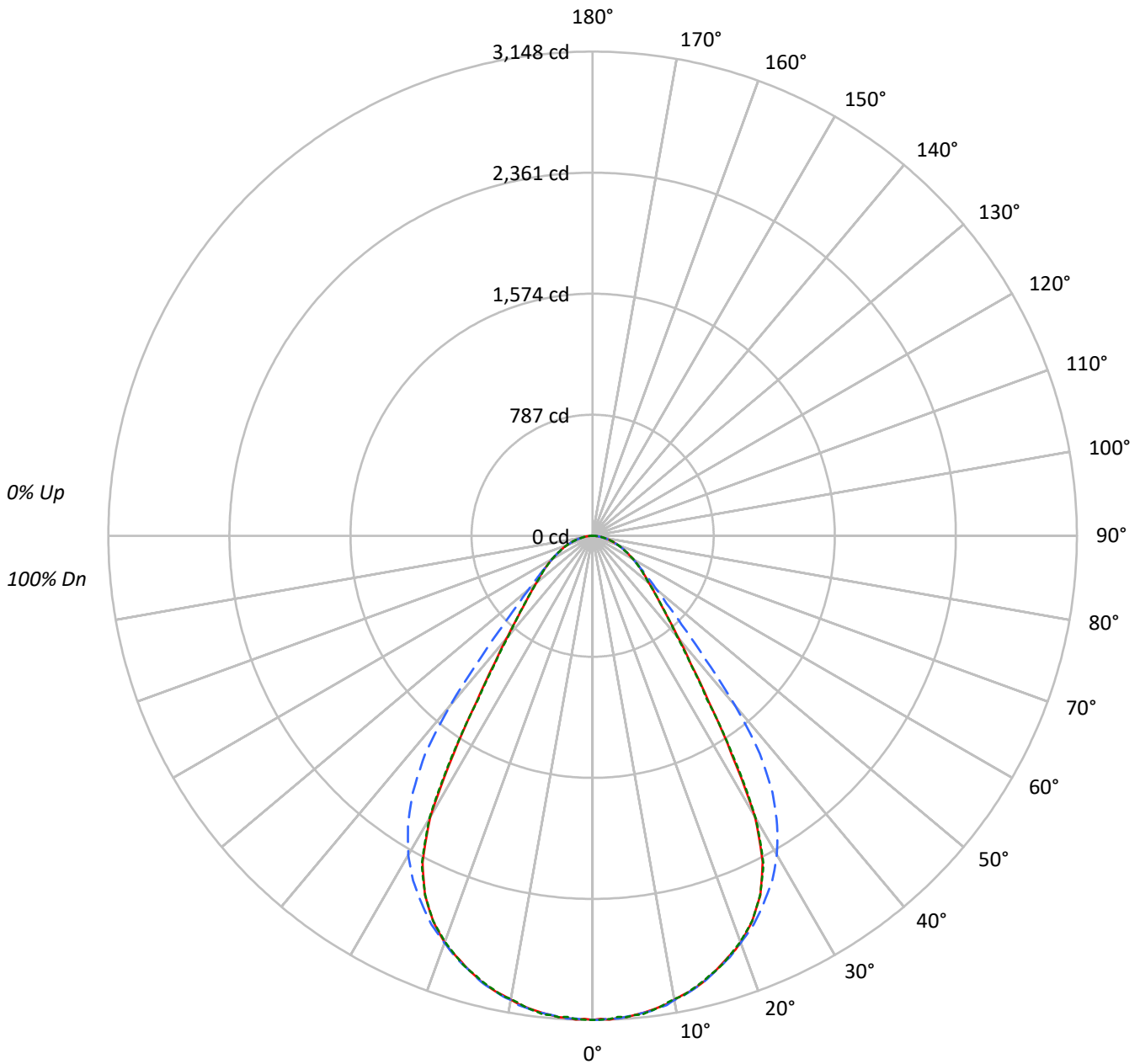
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4643.7 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
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					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	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	67	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	135548	135548	135548
5°	135210	135115	135210
10°	133888	133984	133695
15°	131896	131994	131700
20°	128925	129026	128623
25°	122491	125104	122387
30°	104892	119111	105548
35°	68918	107078	67878
40°	48719	80744	47853
45°	37776	49698	38044
50°	32125	36251	31830
55°	28900	29726	28900
60°	26143	26143	26143
65°	23982	23758	23758
70°	21879	21879	22156
75°	20495	19763	20129
80°	18001	18001	18001
85°	15215	15215	15215

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 49698 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.8	6.4
10°-20°	833.5	17.9
20°-30°	1187.7	25.6
30°-40°	1012.7	21.8
40°-50°	560.3	12.1
50°-60°	352.9	7.6
60°-70°	234.3	5.0
70°-80°	128.7	2.8
80°-90°	36.7	0.8
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°	2318.1	49.9
0°-40°	3330.8	71.7
0°-60°	4244.0	91.4
0°-90°	4643.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4643.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3148	3148	3148	3148	3148	
5°	3128	3133	3126	3122	3128	297
15°	2959	2959	2961	2959	2955	833
25°	2578	2609	2633	2607	2576	1165
35°	1311	1547	2037	1549	1291	852
45°	620	680	816	675	625	492
55°	385	392	396	389	385	346
65°	235	238	233	235	233	234
75°	123	121	119	121	121	129
85°	31	31	31	33	31	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3148.2	3148.2	3148.2	3148.2	3148.2
1°	3141.6	3146.0	3146.0	3143.8	3146.0
2°	3148.2	3141.6	3141.6	3141.6	3143.8
3°	3139.4	3143.8	3143.8	3137.2	3132.8
4°	3137.2	3135.0	3135.0	3141.6	3137.2
5°	3128.4	3132.8	3126.2	3121.8	3128.4
6°	3119.6	3121.8	3119.6	3121.8	3128.4
7°	3108.6	3115.2	3113.0	3110.8	3110.8
8°	3095.4	3104.2	3099.8	3099.8	3097.6
9°	3082.2	3084.4	3088.8	3088.8	3075.6
10°	3062.4	3069.0	3064.6	3066.8	3058.0
11°	3044.8	3053.6	3051.4	3047.0	3049.2
12°	3029.4	3033.8	3031.6	3025.0	3027.2
13°	3009.6	3014.0	3011.8	3011.8	3005.2
14°	2987.6	2983.2	2989.8	2985.4	2983.2
15°	2959.0	2959.0	2961.2	2959.0	2954.6
16°	2932.6	2934.8	2934.8	2932.6	2934.8
17°	2901.8	2910.6	2908.4	2904.0	2906.2
18°	2873.2	2879.8	2882.0	2879.8	2873.2
19°	2846.8	2851.2	2849.0	2840.2	2840.2
20°	2813.8	2816.0	2816.0	2811.6	2807.2
22.5°	2710.4	2725.8	2736.8	2728.0	2710.4
25°	2578.4	2609.2	2633.4	2607.0	2576.2
27.5°	2393.6	2455.2	2527.8	2461.8	2404.6
30°	2109.8	2250.6	2395.8	2263.8	2123.0
32.5°	1678.6	1955.8	2233.0	1982.2	1705.0
35°	1311.2	1546.6	2037.2	1548.8	1291.4
37.5°	1047.2	1214.4	1786.4	1203.4	1036.2
40°	866.8	979.0	1436.6	974.6	851.4
42.5°	723.8	809.6	1075.8	800.8	723.8
45°	620.4	679.8	816.2	675.4	624.8
47.5°	543.4	580.8	653.4	578.6	543.4
50°	479.6	501.6	541.2	499.4	475.2
52.5°	429.0	442.2	457.6	437.8	424.6
55°	385.0	391.6	396.0	389.4	385.0
57.5°	343.2	347.6	345.4	343.2	341.0
60°	303.6	305.8	303.6	305.8	303.6
62.5°	268.4	270.6	266.2	268.4	266.2
65°	235.4	237.6	233.2	235.4	233.2
67.5°	204.6	204.6	204.6	204.6	202.4
70°	173.8	176.0	173.8	176.0	176.0
72.5°	147.4	147.4	145.2	147.4	147.4
75°	123.2	121.0	118.8	121.0	121.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	52.8	52.8	50.6	52.8	52.8
85°	30.8	30.8	30.8	33.0	30.8
87.5°	15.4	13.2	13.2	15.4	15.4
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°	96.8	96.8	94.6	96.8	96.8
80°	72.6	74.8	72.6	74.8	72.6

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Scaled Data Report



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