

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: P838680

Luminaire Tested: HCSQ650D010-HM64560930-61SQH

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ650D010-HM64560930-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

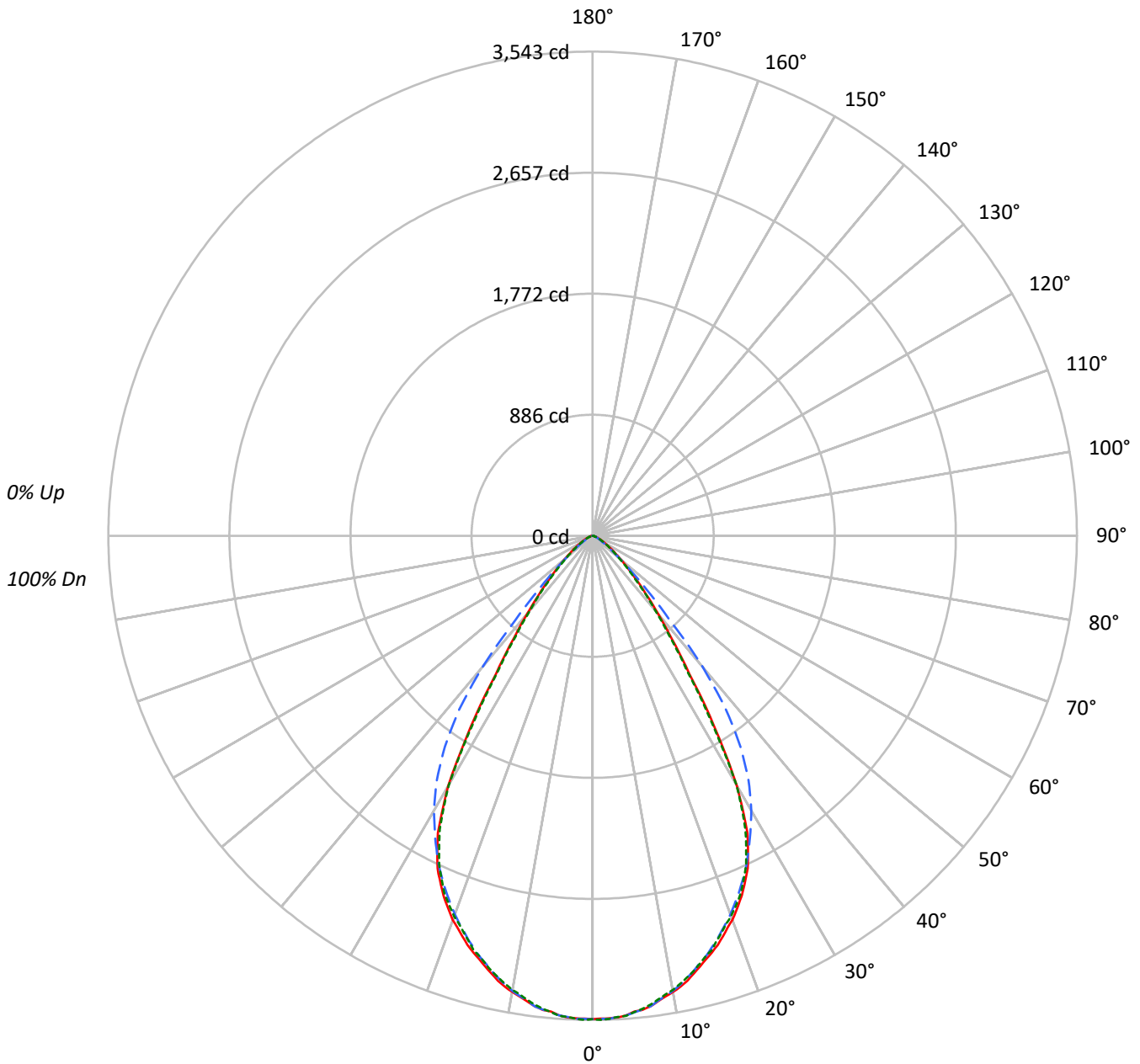
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3978.1 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04
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

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CATALOG NUMBER: HCSQ650D010-HM64560930-61SQH

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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92								
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85								
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78								
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71								
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66								
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61								
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56								
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52								
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48								
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	152292	152292	152292
5°	151093	151348	151262
10°	148206	147865	147524
15°	142973	142184	142099
20°	137076	135097	135729
25°	127589	126467	126187
30°	104847	115382	104554
35°	64755	99094	63210
40°	41569	70234	40136
45°	27114	34044	25799
50°	18005	16953	16819
55°	12221	8835	11342
60°	8275	5408	7604
65°	5797	3994	5196
70°	3701	2958	3462
75°	2612	2279	2279
80°	1934	1463	1463
85°	988	1927	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 34044 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.3	8.3
10°-20°	896.6	22.5
20°-30°	1210.3	30.4
30°-40°	944.6	23.7
40°-50°	395.7	9.9
50°-60°	134.1	3.4
60°-70°	47.8	1.2
70°-80°	15.5	0.4
80°-90°	3.2	0.1
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°	2437.2	61.3
0°-40°	3381.7	85.0
0°-60°	3911.5	98.3
0°-90°	3978.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3978.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3537	3537	3537	3537	3537	
5°	3496	3500	3502	3496	3500	331
15°	3208	3200	3190	3186	3188	902
25°	2686	2674	2662	2662	2656	1208
35°	1232	1446	1885	1444	1203	810
45°	445	477	559	455	424	357
55°	163	149	118	141	151	150
65°	57	47	39	45	51	58
75°	16	14	14	14	14	17
85°	2	2	4	2	2	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3537.1	3537.1	3537.1	3537.1	3537.1
1°	3533.2	3539.0	3535.1	3537.1	3543.0
2°	3533.2	3533.2	3537.1	3535.1	3537.1
3°	3529.2	3529.2	3525.3	3525.3	3525.3
4°	3517.5	3517.5	3517.5	3513.5	3521.4
5°	3495.9	3499.8	3501.8	3495.9	3499.8
6°	3488.0	3490.0	3486.1	3484.1	3480.2
7°	3470.4	3464.5	3470.4	3456.6	3458.6
8°	3441.0	3441.0	3437.0	3433.1	3429.2
9°	3413.5	3413.5	3409.6	3403.7	3399.8
10°	3389.9	3384.1	3382.1	3376.2	3374.3
11°	3362.5	3350.7	3348.7	3342.9	3342.9
12°	3329.1	3323.2	3309.5	3307.6	3307.6
13°	3287.9	3282.0	3272.2	3264.4	3272.2
14°	3248.7	3244.8	3227.1	3233.0	3231.0
15°	3207.5	3199.7	3189.8	3185.9	3187.9
16°	3170.2	3156.5	3142.8	3144.7	3156.5
17°	3131.0	3111.4	3097.6	3095.7	3101.6
18°	3081.9	3066.3	3044.7	3052.5	3052.5
19°	3032.9	3011.3	2997.6	2995.6	3003.5
20°	2991.7	2958.4	2948.5	2946.6	2962.3
22.5°	2850.5	2817.1	2809.3	2817.1	2832.8
25°	2685.7	2673.9	2662.1	2662.1	2656.2
27.5°	2452.2	2479.7	2493.4	2465.9	2420.8
30°	2108.9	2224.7	2320.8	2210.9	2103.0
32.5°	1661.6	1901.0	2122.6	1895.1	1622.4
35°	1232.0	1445.8	1885.3	1443.9	1202.6
37.5°	949.5	1086.8	1602.8	1069.2	922.0
40°	739.6	820.0	1249.6	810.2	714.1
42.5°	574.8	625.8	831.8	614.0	555.2
45°	445.3	476.7	559.1	455.1	423.7
47.5°	347.2	361.0	382.5	345.3	327.6
50°	268.8	268.8	253.1	259.0	251.1
52.5°	207.9	200.1	170.7	188.3	192.3
55°	162.8	149.1	117.7	141.2	151.1
57.5°	123.6	109.9	84.4	104.0	113.8
60°	96.1	82.4	62.8	78.5	88.3
62.5°	74.5	62.8	49.0	58.9	66.7
65°	56.9	47.1	39.2	45.1	51.0
67.5°	43.2	35.3	29.4	33.4	39.2
70°	29.4	27.5	23.5	25.5	27.5
72.5°	21.6	19.6	17.7	17.7	19.6
75°	15.7	13.7	13.7	13.7	13.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	3.9	3.9	3.9	3.9	3.9
85°	2.0	2.0	3.9	2.0	2.0
87.5°	2.0	2.0	2.0	2.0	2.0
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°	9.8	9.8	9.8	9.8	9.8
80°	7.8	7.8	5.9	5.9	5.9

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(END OF REPORT)