

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: P838660

Luminaire Tested: HCSQ650D010-HM64560830-61SQH

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838660
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-HM64560830-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

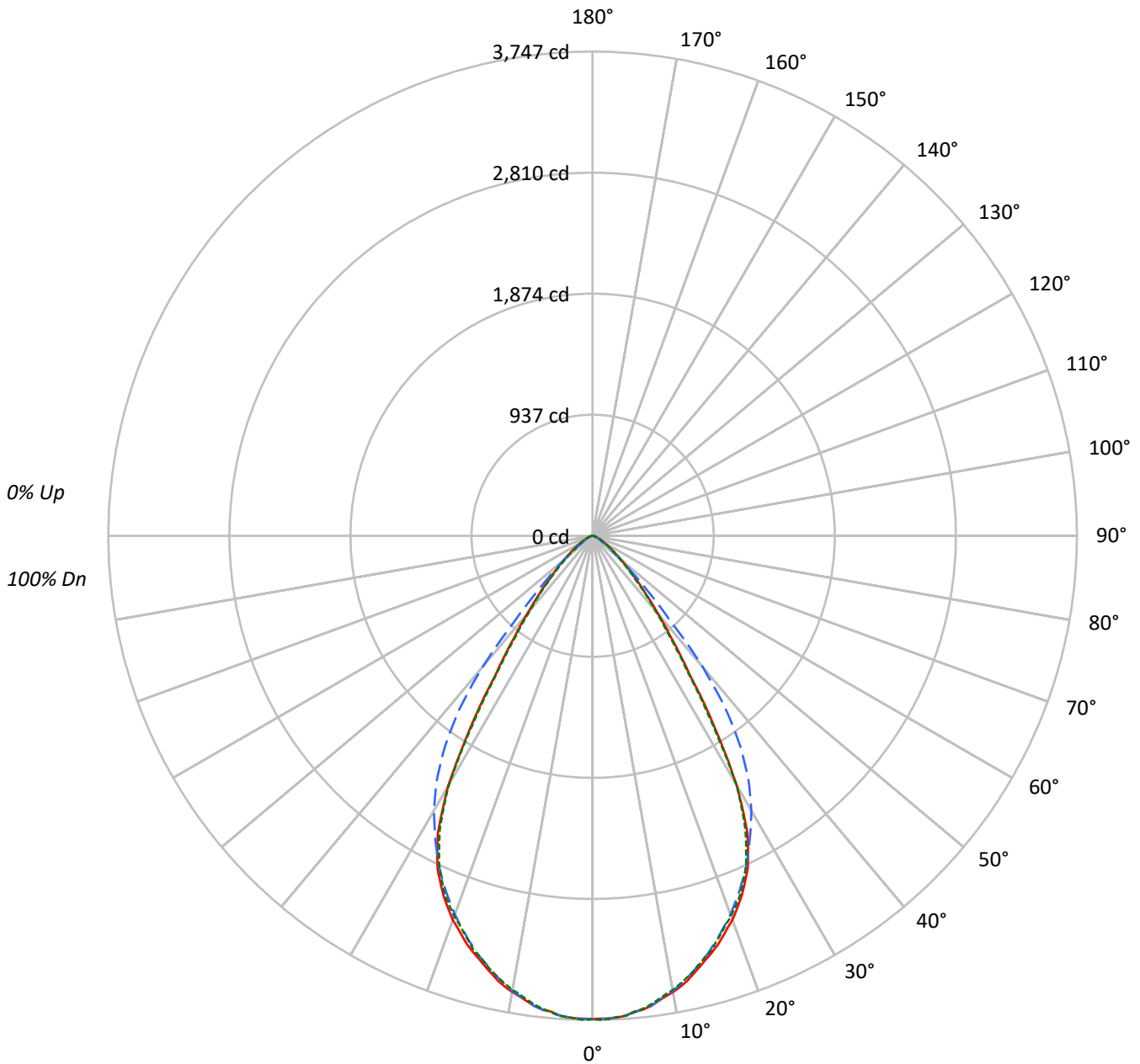
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4207.2 lumens
Efficiency: N/A
Efficacy: 84.7 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 (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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92			92																
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85			85																
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78			78																
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71			71																
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66			66																
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61			61																
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56			56																
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52			52																
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	161063	161063	161063
5°	159793	160061	159971
10°	156744	156382	156019
15°	151206	150372	150283
20°	144971	142877	143546
25°	134933	133750	133456
30°	110887	122024	110574
35°	68482	104797	66847
40°	43964	74281	42446
45°	28679	36004	27285
50°	19036	17925	17791
55°	12926	9346	11995
60°	8758	5718	8043
65°	6133	4228	5491
70°	3915	3135	3651
75°	2761	2412	2412
80°	2058	1537	1537
85°	1037	2025	1037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 36004 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	349.4	8.3
10°-20°	948.2	22.5
20°-30°	1280.0	30.4
30°-40°	998.9	23.7
40°-50°	418.5	9.9
50°-60°	141.9	3.4
60°-70°	50.6	1.2
70°-80°	16.4	0.4
80°-90°	3.3	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°	2577.5	61.3
0°-40°	3576.4	85.0
0°-60°	4136.8	98.3
0°-90°	4207.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4207.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3741	3741	3741	3741	3741	
5°	3697	3701	3703	3697	3701	350
15°	3392	3384	3374	3369	3372	954
25°	2840	2828	2815	2815	2809	1278
35°	1303	1529	1994	1527	1272	857
45°	471	504	591	481	448	378
55°	172	158	124	149	160	159
65°	60	50	42	48	54	62
75°	17	14	14	14	14	18
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°	3740.8	3740.8	3740.8	3740.8	3740.8
1°	3736.6	3742.8	3738.7	3740.8	3747.0
2°	3736.6	3736.6	3740.8	3738.7	3740.8
3°	3732.5	3732.5	3728.3	3728.3	3728.3
4°	3720.0	3720.0	3720.0	3715.9	3724.2
5°	3697.2	3701.3	3703.4	3697.2	3701.3
6°	3688.9	3691.0	3686.8	3684.8	3680.6
7°	3670.2	3664.0	3670.2	3655.7	3657.8
8°	3639.1	3639.1	3635.0	3630.8	3626.7
9°	3610.1	3610.1	3605.9	3599.7	3595.5
10°	3585.2	3578.9	3576.9	3570.6	3568.6
11°	3556.1	3543.7	3541.6	3535.4	3535.4
12°	3520.8	3514.6	3500.1	3498.0	3498.0
13°	3477.3	3471.1	3460.7	3452.4	3460.7
14°	3435.8	3431.6	3413.0	3419.2	3417.1
15°	3392.2	3383.9	3373.5	3369.4	3371.5
16°	3352.8	3338.3	3323.7	3325.8	3338.3
17°	3311.3	3290.5	3276.0	3274.0	3280.2
18°	3259.4	3242.8	3220.0	3228.3	3228.3
19°	3207.6	3184.7	3170.2	3168.1	3176.4
20°	3164.0	3128.7	3118.3	3116.3	3132.9
22.5°	3014.6	2979.3	2971.0	2979.3	2995.9
25°	2840.3	2827.9	2815.4	2815.4	2809.2
27.5°	2593.4	2622.5	2637.0	2608.0	2560.2
30°	2230.4	2352.8	2454.4	2338.2	2224.1
32.5°	1757.3	2010.4	2244.9	2004.2	1715.8
35°	1302.9	1529.1	1993.8	1527.0	1271.8
37.5°	1004.2	1149.4	1695.1	1130.7	975.1
40°	782.2	867.2	1321.6	856.9	755.2
42.5°	607.9	661.8	879.7	649.4	587.2
45°	471.0	504.2	591.3	481.3	448.1
47.5°	367.2	381.8	404.6	365.2	346.5
50°	284.2	284.2	267.6	273.9	265.6
52.5°	219.9	211.6	180.5	199.2	203.3
55°	172.2	157.7	124.5	149.4	159.8
57.5°	130.7	116.2	89.2	110.0	120.3
60°	101.7	87.1	66.4	83.0	93.4
62.5°	78.8	66.4	51.9	62.2	70.5
65°	60.2	49.8	41.5	47.7	53.9
67.5°	45.6	37.3	31.1	35.3	41.5
70°	31.1	29.0	24.9	27.0	29.0
72.5°	22.8	20.7	18.7	18.7	20.7
75°	16.6	14.5	14.5	14.5	14.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	4.1	4.1	4.1	4.1	4.1
85°	2.1	2.1	4.1	2.1	2.1
87.5°	2.1	2.1	2.1	2.1	2.1
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°	10.4	10.4	10.4	10.4	10.4
80°	8.3	8.3	6.2	6.2	6.2

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(END OF REPORT)