

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: P838590

Luminaire Tested: HCSQ640D010-HM63040840-61SQH

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838590
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: HCSQ640D010-HM63040840-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

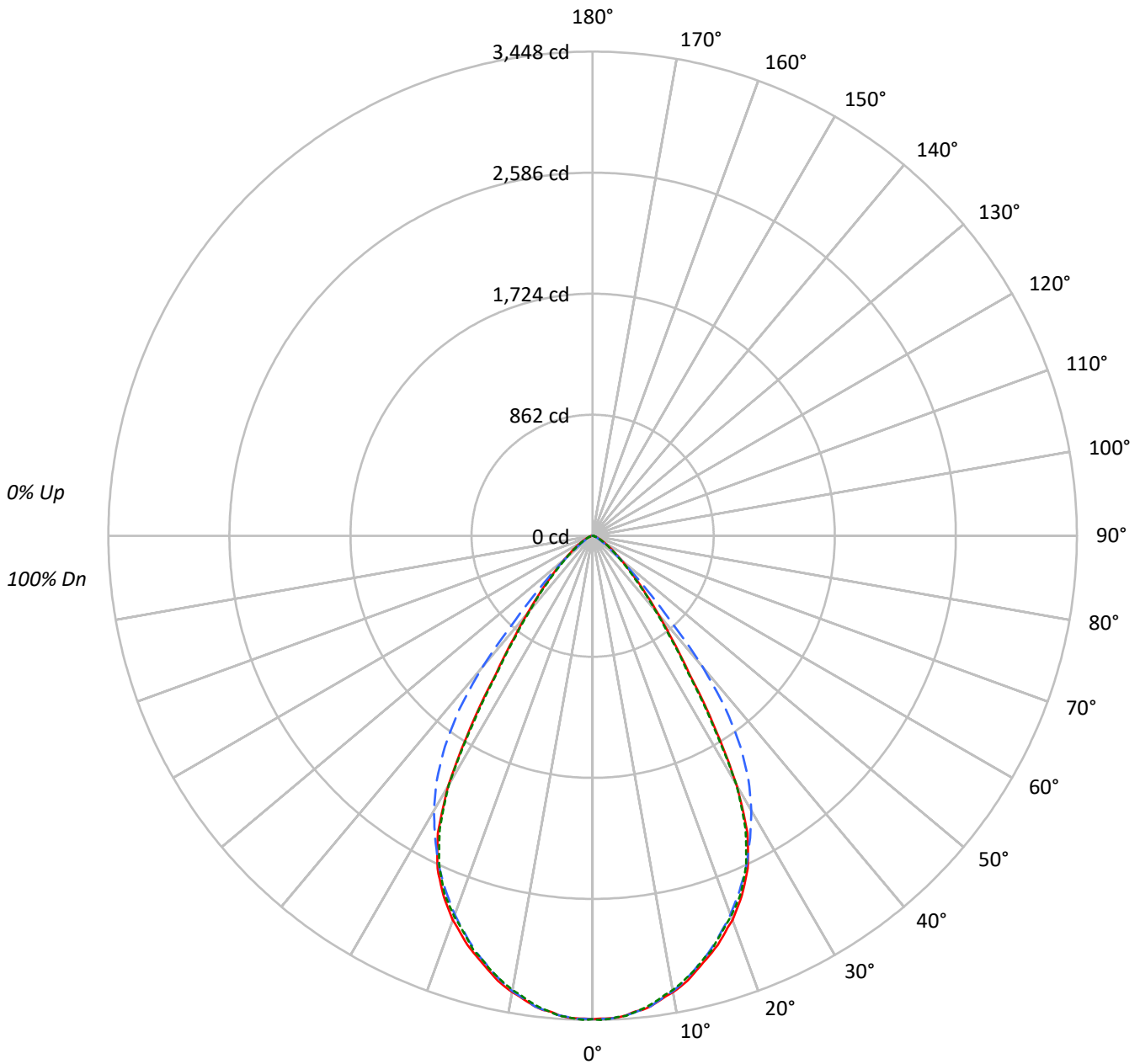
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3871.9 lumens
Efficiency: N/A
Efficacy: 94.4 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): 41
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	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°	148228	148228	148228
5°	147061	147307	147225
10°	144254	143921	143585
15°	139157	138390	138306
20°	133420	131496	132105
25°	124182	123095	122824
30°	102048	112304	101764
35°	63026	96450	61523
40°	40462	68362	39063
45°	26390	33136	25111
50°	17523	16498	16371
55°	11898	8602	11035
60°	8060	5261	7397
65°	5644	3892	5053
70°	3600	2883	3361
75°	2545	2229	2229
80°	1884	1413	1413
85°	939	1877	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 33136 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.5	8.3
10°-20°	872.6	22.5
20°-30°	1178.0	30.4
30°-40°	919.3	23.7
40°-50°	385.1	9.9
50°-60°	130.6	3.4
60°-70°	46.6	1.2
70°-80°	15.1	0.4
80°-90°	3.1	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°	2372.1	61.3
0°-40°	3291.5	85.0
0°-60°	3807.2	98.3
0°-90°	3871.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3871.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3443	3443	3443	3443	3443	
5°	3403	3406	3408	3403	3406	322
15°	3122	3114	3105	3101	3103	878
25°	2614	2603	2591	2591	2585	1176
35°	1199	1407	1835	1405	1170	789
45°	433	464	544	443	412	348
55°	158	145	115	138	147	146
65°	55	46	38	44	50	57
75°	15	13	13	13	13	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°	3442.7	3442.7	3442.7	3442.7	3442.7
1°	3438.9	3444.6	3440.8	3442.7	3448.4
2°	3438.9	3438.9	3442.7	3440.8	3442.7
3°	3435.1	3435.1	3431.2	3431.2	3431.2
4°	3423.6	3423.6	3423.6	3419.8	3427.4
5°	3402.6	3406.4	3408.3	3402.6	3406.4
6°	3395.0	3396.9	3393.1	3391.2	3387.3
7°	3377.8	3372.1	3377.8	3364.4	3366.3
8°	3349.1	3349.1	3345.3	3341.5	3337.7
9°	3322.4	3322.4	3318.6	3312.9	3309.0
10°	3299.5	3293.8	3291.9	3286.1	3284.2
11°	3272.8	3261.3	3259.4	3253.7	3253.7
12°	3240.3	3234.6	3221.2	3219.3	3219.3
13°	3200.2	3194.5	3184.9	3177.3	3184.9
14°	3162.0	3158.2	3141.0	3146.7	3144.8
15°	3121.9	3114.3	3104.7	3100.9	3102.8
16°	3085.6	3072.3	3058.9	3060.8	3072.3
17°	3047.5	3028.4	3015.0	3013.1	3018.8
18°	2999.7	2984.4	2963.4	2971.1	2971.1
19°	2952.0	2931.0	2917.6	2915.7	2923.3
20°	2911.9	2879.4	2869.9	2868.0	2883.2
22.5°	2774.4	2741.9	2734.3	2741.9	2757.2
25°	2614.0	2602.6	2591.1	2591.1	2585.4
27.5°	2386.8	2413.5	2426.9	2400.2	2356.2
30°	2052.6	2165.3	2258.9	2151.9	2046.9
32.5°	1617.3	1850.2	2066.0	1844.5	1579.1
35°	1199.1	1407.3	1835.0	1405.3	1170.5
37.5°	924.2	1057.8	1560.0	1040.6	897.4
40°	719.9	798.1	1216.3	788.6	695.0
42.5°	559.5	609.1	809.6	597.7	540.4
45°	433.4	464.0	544.2	443.0	412.4
47.5°	338.0	351.3	372.3	336.1	318.9
50°	261.6	261.6	246.3	252.0	244.4
52.5°	202.4	194.8	166.1	183.3	187.1
55°	158.5	145.1	114.6	137.5	147.0
57.5°	120.3	106.9	82.1	101.2	110.7
60°	93.6	80.2	61.1	76.4	85.9
62.5°	72.6	61.1	47.7	57.3	64.9
65°	55.4	45.8	38.2	43.9	49.6
67.5°	42.0	34.4	28.6	32.5	38.2
70°	28.6	26.7	22.9	24.8	26.7
72.5°	21.0	19.1	17.2	17.2	19.1
75°	15.3	13.4	13.4	13.4	13.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	3.8	3.8	3.8	3.8	3.8
85°	1.9	1.9	3.8	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

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°	9.5	9.5	9.5	9.5	9.5
80°	7.6	7.6	5.7	5.7	5.7

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(END OF REPORT)