

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: P838615

Luminaire Tested: HCSQ645D010-HM64560827-61SQH

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838615
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: HCSQ645D010-HM64560827-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

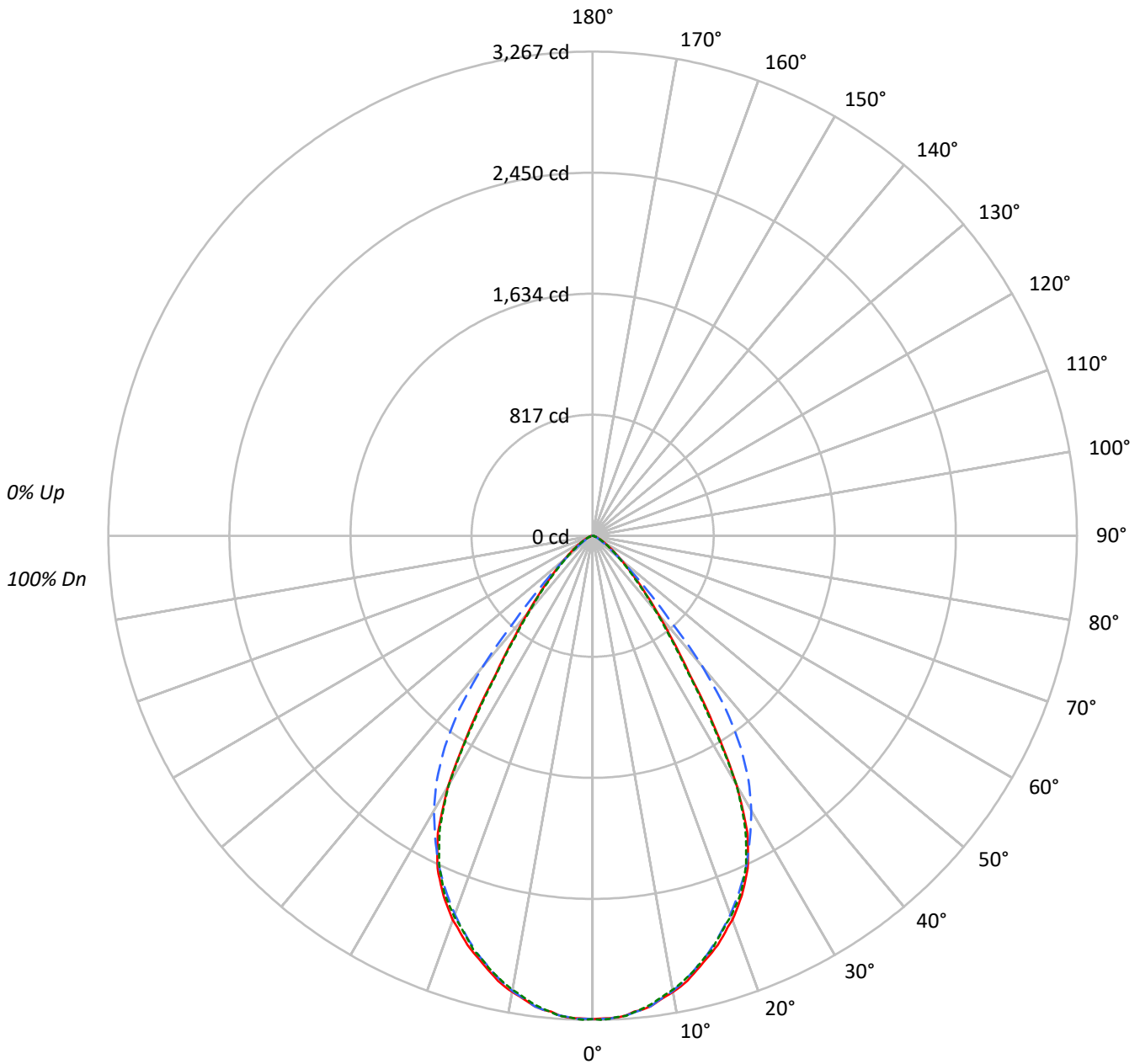
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3668.0 lumens
Efficiency: N/A
Efficacy: 79.9 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): 45.9
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°	140422	140422	140422
5°	139316	139549	139471
10°	136655	136340	136021
15°	131829	131103	131022
20°	126391	124568	125150
25°	117641	116610	116353
30°	96674	106388	96405
35°	59710	91367	58280
40°	38326	64760	37005
45°	25001	31389	23790
50°	16598	15627	15506
55°	11267	8145	10457
60°	7629	4986	7009
65°	5349	3688	4788
70°	3412	2732	3185
75°	2412	2113	2113
80°	1785	1339	1339
85°	889	1778	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 31389 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.6	8.3
10°-20°	826.7	22.5
20°-30°	1115.9	30.4
30°-40°	870.9	23.7
40°-50°	364.8	9.9
50°-60°	123.7	3.4
60°-70°	44.1	1.2
70°-80°	14.3	0.4
80°-90°	2.9	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°	2247.2	61.3
0°-40°	3118.1	85.0
0°-60°	3606.6	98.3
0°-90°	3668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3668.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3261	3261	3261	3261	3261	
5°	3223	3227	3229	3223	3227	305
15°	2958	2950	2941	2938	2939	832
25°	2476	2466	2455	2455	2449	1114
35°	1136	1333	1738	1331	1109	747
45°	411	440	516	420	391	330
55°	150	138	108	130	139	139
65°	52	43	36	42	47	54
75°	14	13	13	13	13	16
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°	3261.4	3261.4	3261.4	3261.4	3261.4
1°	3257.8	3263.2	3259.6	3261.4	3266.8
2°	3257.8	3257.8	3261.4	3259.6	3261.4
3°	3254.1	3254.1	3250.5	3250.5	3250.5
4°	3243.3	3243.3	3243.3	3239.7	3246.9
5°	3223.4	3227.0	3228.8	3223.4	3227.0
6°	3216.2	3218.0	3214.4	3212.5	3208.9
7°	3199.9	3194.5	3199.9	3187.2	3189.0
8°	3172.7	3172.7	3169.1	3165.5	3161.9
9°	3147.4	3147.4	3143.8	3138.4	3134.8
10°	3125.7	3120.3	3118.5	3113.1	3111.2
11°	3100.4	3089.5	3087.7	3082.3	3082.3
12°	3069.6	3064.2	3051.6	3049.7	3049.7
13°	3031.7	3026.2	3017.2	3009.9	3017.2
14°	2995.5	2991.9	2975.6	2981.0	2979.2
15°	2957.5	2950.3	2941.2	2937.6	2939.4
16°	2923.1	2910.5	2897.8	2899.6	2910.5
17°	2886.9	2868.9	2856.2	2854.4	2859.8
18°	2841.7	2827.3	2807.4	2814.6	2814.6
19°	2796.5	2776.6	2763.9	2762.1	2769.4
20°	2758.5	2727.8	2718.7	2716.9	2731.4
22.5°	2628.3	2597.5	2590.3	2597.5	2612.0
25°	2476.3	2465.5	2454.6	2454.6	2449.2
27.5°	2261.1	2286.4	2299.1	2273.7	2232.1
30°	1944.5	2051.3	2139.9	2038.6	1939.1
32.5°	1532.1	1752.8	1957.2	1747.4	1495.9
35°	1136.0	1333.1	1738.3	1331.3	1108.8
37.5°	875.5	1002.1	1477.8	985.8	850.2
40°	681.9	756.1	1152.2	747.1	658.4
42.5°	530.0	577.0	767.0	566.2	511.9
45°	410.6	439.6	515.5	419.7	390.7
47.5°	320.2	332.8	352.7	318.4	302.1
50°	247.8	247.8	233.3	238.8	231.5
52.5°	191.7	184.5	157.4	173.7	177.3
55°	150.1	137.5	108.5	130.2	139.3
57.5°	114.0	101.3	77.8	95.9	104.9
60°	88.6	76.0	57.9	72.4	81.4
62.5°	68.7	57.9	45.2	54.3	61.5
65°	52.5	43.4	36.2	41.6	47.0
67.5°	39.8	32.6	27.1	30.8	36.2
70°	27.1	25.3	21.7	23.5	25.3
72.5°	19.9	18.1	16.3	16.3	18.1
75°	14.5	12.7	12.7	12.7	12.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	3.6	3.6	3.6	3.6	3.6
85°	1.8	1.8	3.6	1.8	1.8
87.5°	1.8	1.8	1.8	1.8	1.8
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°	9.0	9.0	9.0	9.0	9.0
80°	7.2	7.2	5.4	5.4	5.4

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