

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: P838625

Luminaire Tested: HCSQ645D010-HM64560835-61SQH

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838625
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-HM64560835-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

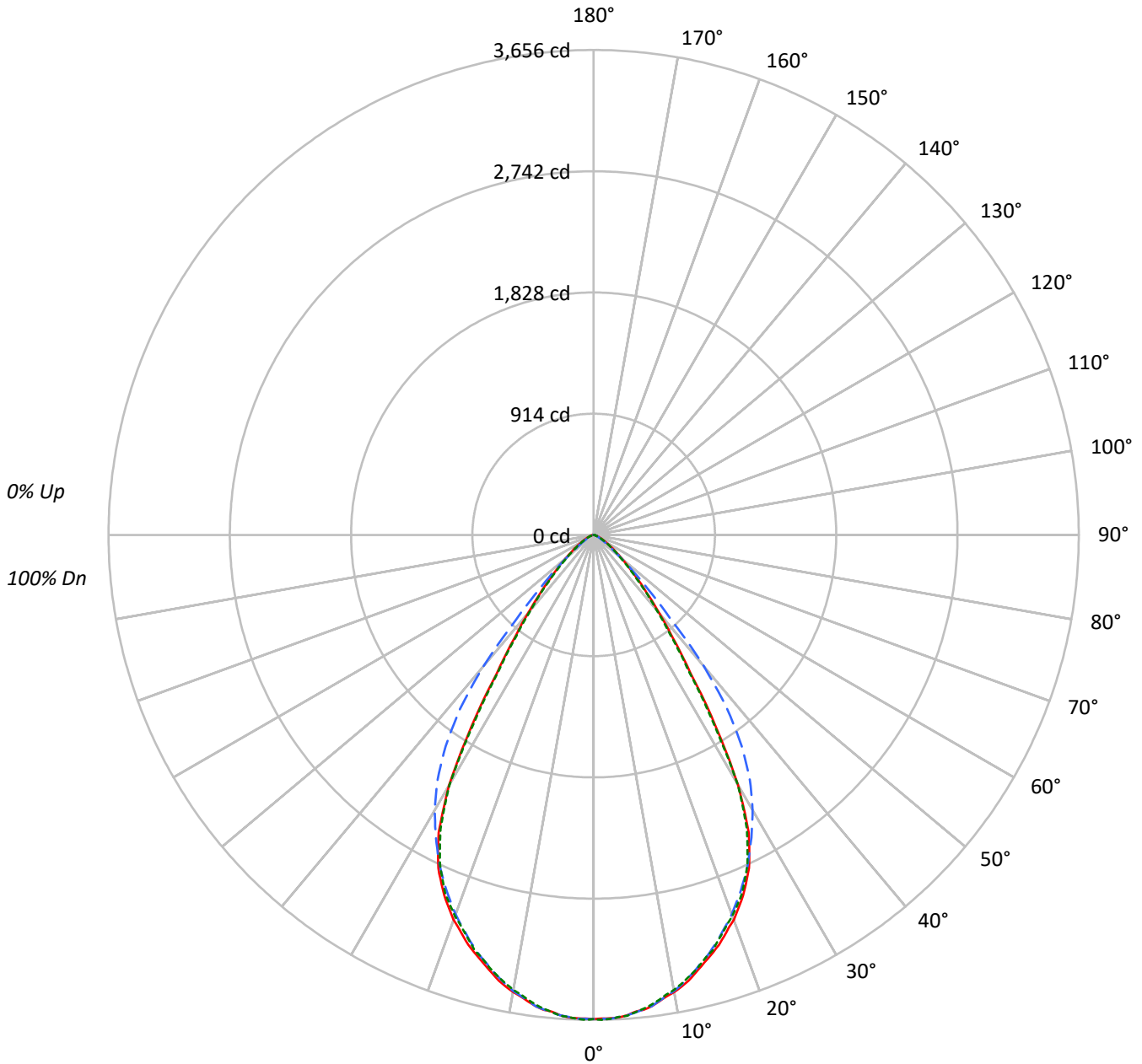
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4105.4 lumens
Efficiency: N/A
Efficacy: 89.4 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): 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	100	98	97	97	95	94	92
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92	92	92	91	88	86	85	85	85
	2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85	85	85	84	81	79	78	78	78
	3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78	78	78	77	74	73	71	71	71
	4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71	71	71	76	73	71	66	66	66
	5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66	66	66	71	68	67	66	66	66
	6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61	61	61	66	63	62	61	61	61
	7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56	56	56	62	58	57	56	56	56
	8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52	52	52	57	54	53	52	52	52
	9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48	48	48	54	50	49	48	48	48
	10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45	45	45	51	47	46	45	45	45

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	157166	157166	157166
5°	155925	156189	156102
10°	152950	152595	152241
15°	147546	146735	146646
20°	141461	139422	140073
25°	131669	130515	130225
30°	108203	119071	107899
35°	66826	102263	65229
40°	42901	72482	41418
45°	27985	35133	26627
50°	18581	17496	17355
55°	12611	9120	11703
60°	8542	5580	7845
65°	5980	4126	5359
70°	3827	3059	3563
75°	2695	2362	2362
80°	2008	1512	1512
85°	988	1976	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 35133 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	340.9	8.3
10°-20°	925.2	22.5
20°-30°	1249.0	30.4
30°-40°	974.8	23.7
40°-50°	408.3	9.9
50°-60°	138.4	3.4
60°-70°	49.4	1.2
70°-80°	16.0	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°	2515.1	61.3
0°-40°	3489.9	85.0
0°-60°	4036.7	98.3
0°-90°	4105.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4105.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3650	3650	3650	3650	3650	
5°	3608	3612	3614	3608	3612	341
15°	3310	3302	3292	3288	3290	931
25°	2772	2760	2747	2747	2741	1247
35°	1271	1492	1946	1490	1241	836
45°	460	492	577	470	437	369
55°	168	154	122	146	156	155
65°	59	49	40	47	53	60
75°	16	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°	3650.3	3650.3	3650.3	3650.3	3650.3
1°	3646.2	3652.3	3648.2	3650.3	3656.3
2°	3646.2	3646.2	3650.3	3648.2	3650.3
3°	3642.2	3642.2	3638.1	3638.1	3638.1
4°	3630.0	3630.0	3630.0	3626.0	3634.1
5°	3607.7	3611.8	3613.8	3607.7	3611.8
6°	3599.6	3601.7	3597.6	3595.6	3591.5
7°	3581.4	3575.4	3581.4	3567.3	3569.3
8°	3551.1	3551.1	3547.0	3543.0	3538.9
9°	3522.7	3522.7	3518.7	3512.6	3508.5
10°	3498.4	3492.3	3490.3	3484.2	3482.2
11°	3470.1	3457.9	3455.9	3449.8	3449.8
12°	3435.7	3429.6	3415.4	3413.4	3413.4
13°	3393.1	3387.1	3376.9	3368.8	3376.9
14°	3352.7	3348.6	3330.4	3336.5	3334.4
15°	3310.1	3302.0	3291.9	3287.9	3289.9
16°	3271.7	3257.5	3243.3	3245.3	3257.5
17°	3231.2	3210.9	3196.8	3194.7	3200.8
18°	3180.6	3164.4	3142.1	3150.2	3150.2
19°	3129.9	3107.7	3093.5	3091.5	3099.6
20°	3087.4	3053.0	3042.9	3040.9	3057.1
22.5°	2941.7	2907.2	2899.2	2907.2	2923.4
25°	2771.6	2759.5	2747.3	2747.3	2741.2
27.5°	2530.7	2559.0	2573.2	2544.9	2498.3
30°	2176.4	2295.8	2395.0	2281.7	2170.3
32.5°	1714.8	1961.8	2190.6	1955.7	1674.3
35°	1271.4	1492.1	1945.6	1490.1	1241.0
37.5°	979.9	1121.6	1654.1	1103.4	951.5
40°	763.3	846.3	1289.6	836.1	736.9
42.5°	593.2	645.8	858.4	633.7	572.9
45°	459.6	492.0	577.0	469.7	437.3
47.5°	358.3	372.5	394.8	356.3	338.1
50°	277.4	277.4	261.2	267.2	259.1
52.5°	214.6	206.5	176.1	194.4	198.4
55°	168.0	153.9	121.5	145.8	155.9
57.5°	127.5	113.4	87.1	107.3	117.4
60°	99.2	85.0	64.8	81.0	91.1
62.5°	76.9	64.8	50.6	60.7	68.8
65°	58.7	48.6	40.5	46.6	52.6
67.5°	44.5	36.4	30.4	34.4	40.5
70°	30.4	28.3	24.3	26.3	28.3
72.5°	22.3	20.2	18.2	18.2	20.2
75°	16.2	14.2	14.2	14.2	14.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	4.0	4.0	4.0	4.0	4.0
85°	2.0	2.0	4.0	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°	10.1	10.1	10.1	10.1	10.1
80°	8.1	8.1	6.1	6.1	6.1

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(END OF REPORT)