

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: P838639

Luminaire Tested: HCSQ645D010-HM64560930-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ645D010-HM64560930-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

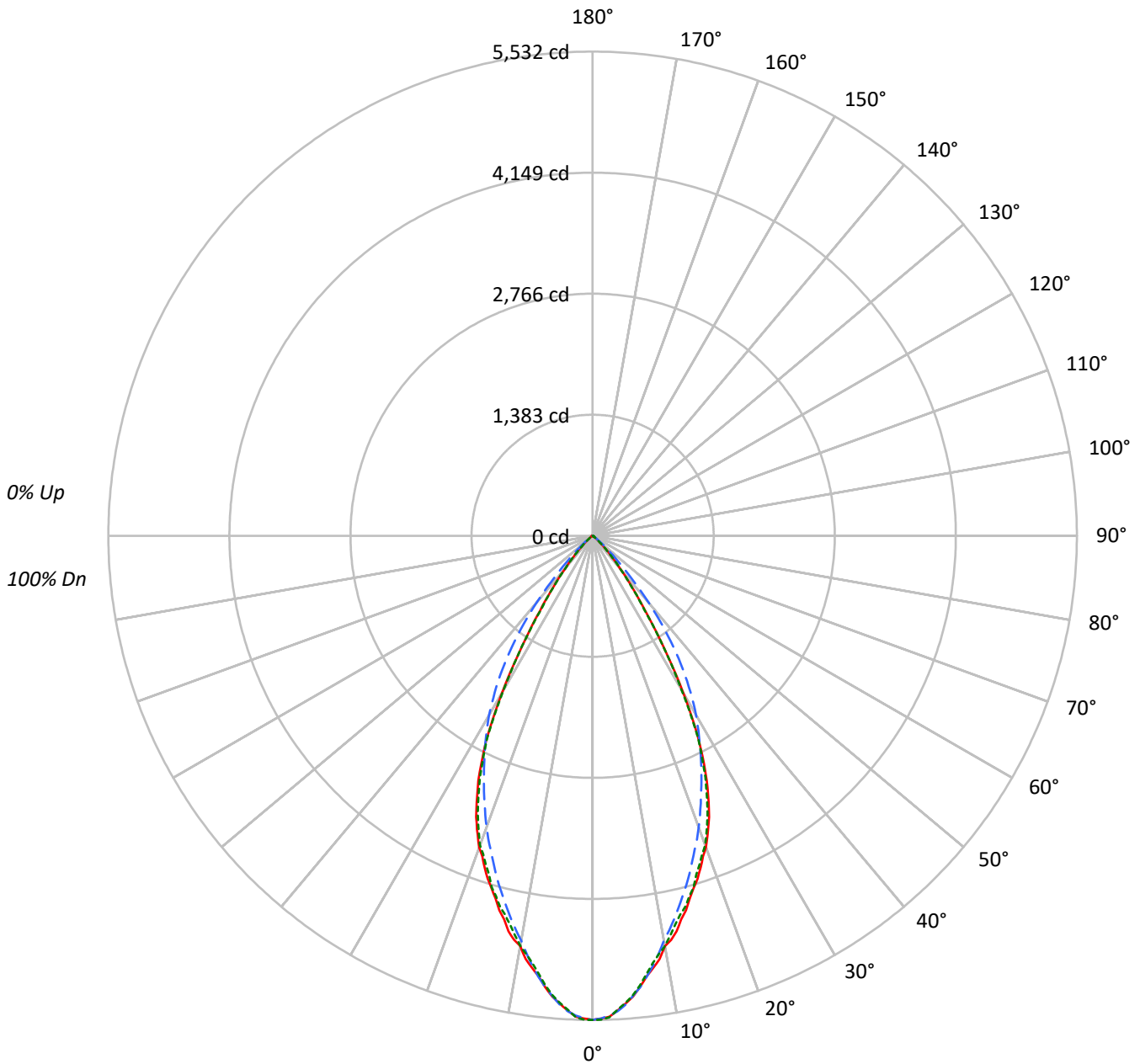
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4143.9 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94								
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81								
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76								
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71								
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66								
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62								
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59								
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55								
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	238201	238201	238201
5°	228492	228090	227770
10°	208107	205282	207945
15°	191256	184253	190101
20°	173566	162391	172380
25°	146686	139579	144667
30°	102709	117500	100964
35°	55168	90132	54096
40°	27316	55772	27108
45°	11928	23516	11703
50°	3838	8540	3838
55°	1944	2777	1802
60°	1274	1274	1274
65°	937	937	937
70°	692	692	692
75°	616	616	616
80°	446	446	446
85°	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23516 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.8	11.7
10°-20°	1173.1	28.3
20°-30°	1355.1	32.7
30°-40°	846.3	20.4
40°-50°	235.1	5.7
50°-60°	32.9	0.8
60°-70°	9.7	0.2
70°-80°	4.1	0.1
80°-90°	1.7	0.0
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°	3014.1	72.7
0°-40°	3860.4	93.2
0°-60°	4128.4	99.6
0°-90°	4143.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4143.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5532	5532	5532	5532	5532	
5°	5287	5272	5277	5270	5270	487
15°	4291	4209	4134	4198	4265	1202
25°	3088	2997	2938	2995	3045	1379
35°	1050	1295	1715	1281	1029	697
45°	196	250	386	248	192	170
55°	26	26	37	26	24	26
65°	9	9	9	9	9	10
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5532.4	5532.4	5532.4	5532.4	5532.4
1°	5515.8	5515.8	5515.8	5530.6	5530.6
2°	5499.2	5495.5	5486.2	5497.3	5502.9
3°	5430.8	5438.2	5441.9	5436.4	5423.4
4°	5360.6	5353.2	5373.5	5360.6	5349.5
5°	5286.7	5271.9	5277.4	5270.0	5270.0
6°	5183.2	5201.7	5186.9	5174.0	5166.6
7°	5070.5	5085.3	5076.0	5057.5	5044.6
8°	4981.8	4972.5	4957.8	4954.1	4931.9
9°	4896.8	4863.5	4830.3	4835.8	4841.3
10°	4760.0	4763.7	4695.4	4747.1	4756.3
11°	4702.8	4682.4	4591.9	4634.4	4649.2
12°	4619.6	4554.9	4477.3	4512.4	4540.1
13°	4499.5	4433.0	4362.8	4416.3	4444.1
14°	4409.0	4333.2	4244.5	4312.9	4370.1
15°	4290.7	4209.4	4133.6	4198.3	4264.8
16°	4187.2	4093.0	4017.2	4080.0	4179.8
17°	4096.7	3980.3	3887.9	3954.4	4050.5
18°	3991.3	3856.4	3771.4	3841.7	3950.7
19°	3874.9	3738.2	3662.4	3719.7	3845.4
20°	3788.1	3634.7	3544.2	3599.6	3762.2
22.5°	3477.6	3316.9	3233.7	3300.2	3429.6
25°	3087.7	2997.2	2938.1	2995.4	3045.2
27.5°	2625.8	2625.8	2646.1	2622.1	2607.3
30°	2065.9	2215.6	2363.4	2208.2	2030.8
32.5°	1507.8	1748.1	2045.6	1779.5	1506.0
35°	1049.6	1295.3	1714.8	1280.6	1029.2
37.5°	729.9	892.5	1352.6	901.7	720.7
40°	486.0	598.7	992.3	609.8	482.3
42.5°	317.8	395.4	641.2	397.3	310.4
45°	195.9	249.5	386.2	247.6	192.2
47.5°	114.6	147.8	225.4	149.7	112.7
50°	57.3	86.8	127.5	85.0	57.3
52.5°	33.3	46.2	70.2	44.3	33.3
55°	25.9	25.9	37.0	25.9	24.0
57.5°	20.3	20.3	20.3	20.3	18.5
60°	14.8	16.6	14.8	14.8	14.8
62.5°	12.9	12.9	11.1	12.9	11.1
65°	9.2	9.2	9.2	9.2	9.2
67.5°	7.4	7.4	7.4	7.4	7.4
70°	5.5	5.5	5.5	5.5	5.5
72.5°	3.7	5.5	3.7	5.5	5.5
75°	3.7	3.7	3.7	3.7	3.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.8	1.8	1.8	1.8	1.8
85°	1.8	1.8	1.8	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°	3.7	3.7	3.7	3.7	1.8
80°	1.8	1.8	1.8	1.8	1.8

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(END OF REPORT)