

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: P838386

Luminaire Tested: HCSQ615D010-HM60525835-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838386
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ615D010-HM60525835-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

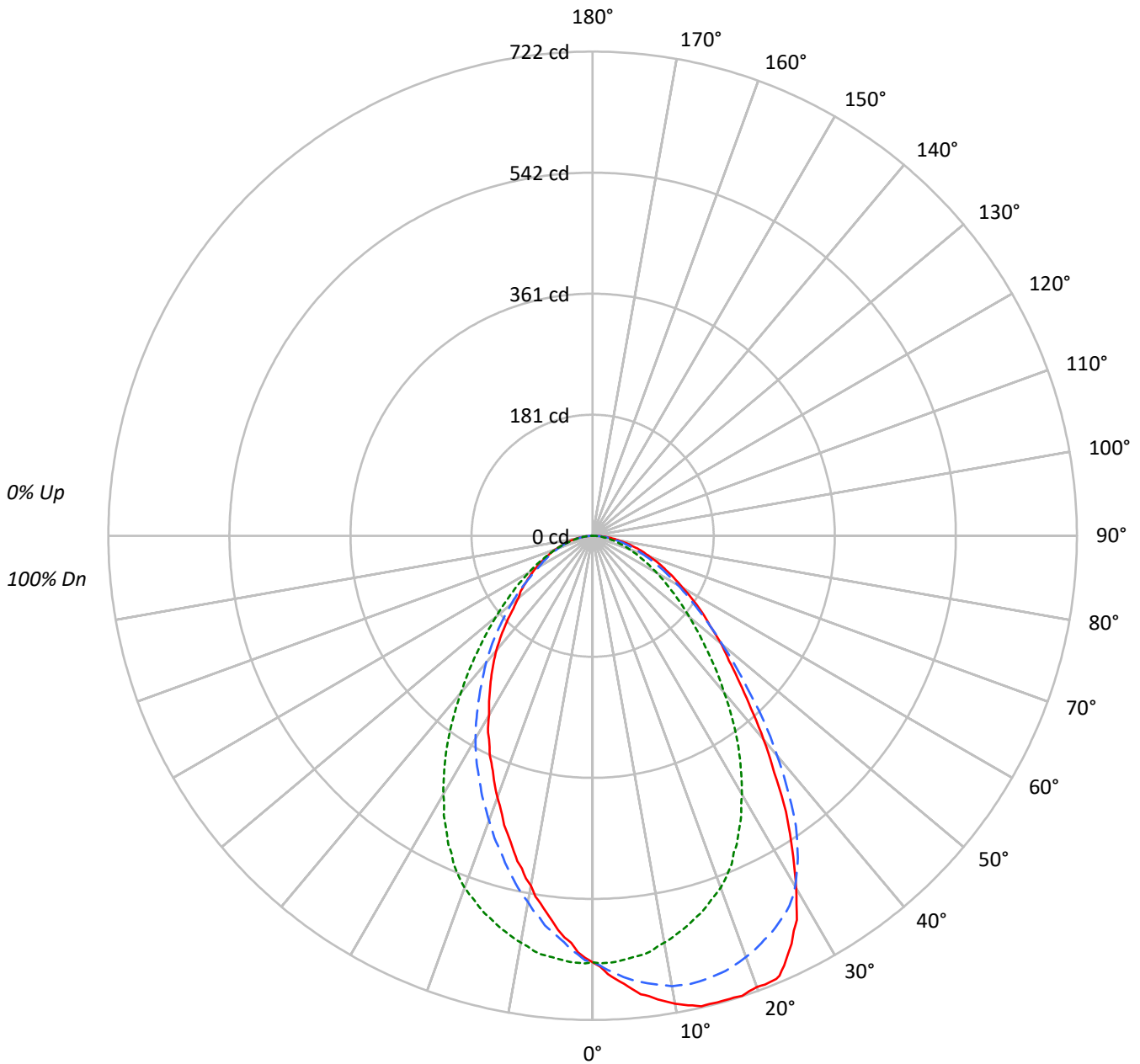
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1202.3 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	61593	61593	61593	61593	61593
5°	66001	64644	61498	58318	57394
10°	69705	67098	60606	54576	52097
15°	72231	68340	59193	50588	47378
20°	73825	68912	57546	46598	42742
25°	73637	68907	54354	42713	38705
30°	67923	67581	49801	39062	34565
35°	59415	62508	44597	34935	31316
40°	50193	54107	38571	31249	28239
45°	42430	45327	33018	27414	24715
50°	37648	38009	28319	23903	21748
55°	33695	32538	24490	20572	20470
60°	30070	28365	21371	17806	19259
65°	27622	25203	18567	16550	17628
70°	25464	22560	16400	15437	16400
75°	23955	20119	14261	13999	15047
80°	22036	18048	12552	12887	13668
85°	21897	16284	10559	10559	12116

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 45704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.0	5.0
10°-20°	167.1	13.9
20°-30°	238.4	19.8
30°-40°	245.7	20.4
40°-50°	197.8	16.5
50°-60°	139.9	11.6
60°-70°	90.6	7.5
70°-80°	48.7	4.1
80°-90°	14.1	1.2
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°	465.5	38.7
0°-40°	711.2	59.2
0°-60°	1048.9	87.2
0°-90°	1202.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1202.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	636	636	636	636	636	
5°	679	665	632	600	590	66
15°	720	681	590	504	472	204
25°	689	645	508	400	362	314
35°	502	529	377	295	265	312
45°	310	331	241	200	180	242
55°	200	193	145	122	121	178
65°	120	110	81	72	77	120
75°	64	54	38	37	40	68
85°	20	15	10	10	11	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	635.8	635.8	635.8	635.8	635.8	635.8	635.8	635.8	635.8	635.8	635.8
1°	642.6	645.3	643.3	643.3	641.2	640.6	641.9	639.9	639.2	637.8	635.1
2°	654.2	652.1	651.5	652.1	648.1	648.1	646.0	641.9	639.9	637.2	629.7
3°	662.3	661.0	659.6	658.9	654.9	651.5	648.7	644.0	639.9	636.5	625.6
4°	669.8	669.8	668.5	665.8	661.7	657.6	652.1	646.7	640.6	634.4	620.1
5°	678.7	679.4	673.2	672.6	667.8	661.7	655.5	648.1	640.6	632.4	616.7
6°	687.5	684.1	682.8	678.0	671.2	665.8	658.3	650.1	639.9	630.4	609.2
7°	691.6	690.9	687.5	682.8	676.6	667.8	660.3	649.4	638.5	629.0	603.8
8°	698.4	698.4	694.3	688.2	679.4	671.2	661.7	648.7	637.8	625.6	596.3
9°	703.2	703.2	697.7	692.3	684.1	673.2	662.3	648.1	634.4	620.1	589.5
10°	708.6	707.3	703.2	695.0	688.2	676.0	662.3	647.4	632.4	616.1	582.7
11°	712.7	710.7	705.9	699.8	688.9	676.6	662.3	647.4	629.7	612.0	575.9
12°	716.1	714.8	708.6	701.1	690.3	678.0	661.7	644.6	624.9	606.5	567.0
13°	720.2	716.1	710.0	703.2	690.9	676.6	658.9	640.6	621.5	601.8	559.6
14°	719.5	718.8	713.4	703.9	690.3	675.3	658.3	636.5	616.7	596.3	550.7
15°	720.2	719.5	713.4	704.6	689.6	673.2	656.2	633.8	612.0	590.2	541.9
16°	720.2	720.2	712.0	703.2	688.9	671.2	652.1	631.0	607.2	585.4	534.4
17°	720.2	720.2	713.4	701.1	686.9	669.8	648.1	625.6	601.8	578.6	523.5
18°	721.6	719.5	710.7	700.5	684.1	666.4	645.3	621.5	597.0	571.1	516.0
19°	718.2	716.8	709.3	696.4	682.1	662.3	641.2	616.7	592.2	565.0	507.1
20°	716.1	718.2	708.0	694.3	678.0	658.9	637.2	612.0	585.4	558.2	498.3
21°	716.8	716.1	705.2	690.9	675.3	654.2	632.4	606.5	577.9	550.0	490.1
22.5°	715.4	713.4	701.8	686.2	667.1	648.1	624.2	597.7	567.0	535.7	474.5
23°	712.7	710.7	701.8	684.8	664.4	645.3	620.1	592.2	563.0	531.0	470.4
24°	701.8	701.1	697.1	680.0	661.0	639.9	615.4	583.4	550.7	517.4	460.2
25°	688.9	690.3	688.2	677.3	655.5	633.8	607.9	572.5	539.1	508.5	447.9
26°	676.6	676.6	675.3	671.2	650.1	626.9	597.0	559.6	527.6	495.6	435.0
27°	661.0	663.7	661.0	658.9	644.6	619.5	585.4	550.7	514.6	483.3	424.1
28°	648.7	648.7	647.4	644.0	639.2	610.6	573.2	537.8	502.4	472.4	411.8
29°	626.9	631.0	631.7	632.4	631.7	599.0	561.6	523.5	489.4	456.8	400.3
30°	607.2	611.3	614.0	618.8	619.5	588.8	548.0	511.9	477.2	445.2	390.1
32.5°	553.4	560.9	568.4	576.6	580.7	558.2	514.6	475.1	439.7	411.2	358.7
35°	502.4	504.4	512.6	531.6	535.7	521.4	475.1	437.7	404.4	377.1	329.5
37.5°	444.5	448.6	460.2	482.0	483.3	471.7	439.7	396.2	364.9	341.0	299.5
40°	396.9	398.9	407.1	425.5	431.6	424.1	396.2	356.7	328.1	305.0	270.9
42.5°	349.2	351.9	362.1	376.4	385.3	376.4	351.9	317.9	290.0	273.0	243.7
45°	309.7	313.1	322.7	330.8	333.6	328.1	306.3	278.4	258.7	241.0	218.5
47.5°	275.7	279.1	285.9	289.3	292.7	287.3	270.2	247.1	227.4	213.1	192.6
50°	249.8	249.1	253.9	255.3	255.3	249.1	234.9	215.8	199.5	187.9	170.9
52.5°	220.6	221.9	225.3	224.0	223.3	217.8	205.6	189.2	175.6	165.4	149.8
55°	199.5	197.4	199.5	198.1	195.4	189.9	179.0	165.4	153.8	145.0	130.7
57.5°	176.3	176.3	177.0	174.3	170.9	164.7	155.2	144.3	134.1	126.6	115.0
60°	155.2	156.6	155.9	153.2	149.8	143.0	135.5	124.6	115.7	110.3	99.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	105.5	105.5	103.5	101.4	96.7	90.5	85.1	78.3	73.5	68.8	61.9
70°	89.9	91.2	88.5	85.1	81.7	77.6	71.5	66.0	61.3	57.9	52.4
72.5°	77.6	76.9	74.9	71.5	68.8	64.0	58.5	54.5	50.4	47.7	43.6
75°	64.0	64.0	61.9	59.2	55.8	51.7	47.7	44.2	40.8	38.1	36.1
77.5°	51.1	51.7	49.7	47.7	44.9	40.8	37.4	34.7	32.0	30.0	28.6
80°	39.5	40.2	38.1	36.8	33.4	31.3	28.6	25.9	23.8	22.5	21.8
82.5°	30.0	29.3	27.9	27.2	24.5	22.5	19.7	18.4	17.0	15.7	15.7
85°	19.7	19.1	18.4	17.7	15.7	13.6	12.9	11.6	10.2	9.5	9.5
87.5°	10.2	10.2	9.5	8.8	8.2	6.8	6.1	4.8	4.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	635.8	635.8	635.8
1°	633.1	630.4	629.7
2°	624.9	620.8	621.5
3°	617.4	612.7	607.9
4°	607.9	600.4	600.4
5°	599.7	592.2	590.2
6°	592.2	580.0	577.3
7°	585.4	570.4	565.7
8°	573.9	558.9	554.1
9°	565.7	549.3	544.6
10°	554.8	538.5	529.6
11°	545.9	527.6	520.8
12°	536.4	513.9	507.1
13°	525.5	502.4	498.3
14°	515.3	492.8	485.4
15°	504.4	481.3	472.4
16°	492.8	469.7	461.5
17°	483.3	457.4	451.3
18°	473.8	446.6	437.0
19°	462.2	436.3	425.5
20°	452.0	423.4	414.6
21°	441.1	413.9	404.4
22.5°	426.1	395.5	386.7
23°	421.4	390.1	380.5
24°	410.5	379.2	371.0
25°	399.6	371.0	362.1
26°	390.1	358.7	350.6
27°	380.5	349.2	340.4
28°	370.3	339.0	332.2
29°	360.1	328.1	321.3
30°	349.2	320.6	309.0
32.5°	322.0	296.1	286.6
35°	295.4	273.0	264.8
37.5°	269.6	251.2	243.7
40°	247.1	230.8	223.3
42.5°	224.0	209.0	201.5
45°	200.1	187.9	180.4
47.5°	178.4	168.1	160.0
50°	158.6	148.4	144.3
52.5°	139.5	132.7	134.8
55°	121.8	121.8	121.2
57.5°	104.8	109.6	110.3
60°	91.9	98.0	99.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	63.3	66.7	68.1
70°	54.5	57.2	57.9
72.5°	46.3	48.3	49.7
75°	37.4	40.2	40.2
77.5°	30.6	32.0	32.7
80°	23.1	23.8	24.5
82.5°	16.3	17.0	17.7
85°	9.5	10.2	10.9
87.5°	4.1	4.1	4.1
90°	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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62.5°	137.5	138.9	136.8	133.4	130.0	123.9	117.1	107.6	100.7	95.3	85.8
65°	120.5	121.2	119.8	116.4	113.0	106.9	100.1	91.9	86.5	81.0	72.8

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62.5°	82.4	87.1	87.8
65°	72.2	76.2	76.9

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(END OF REPORT)