

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: P838381

Luminaire Tested: HCSQ615D010-HM60525830-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838381
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-HM60525830-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

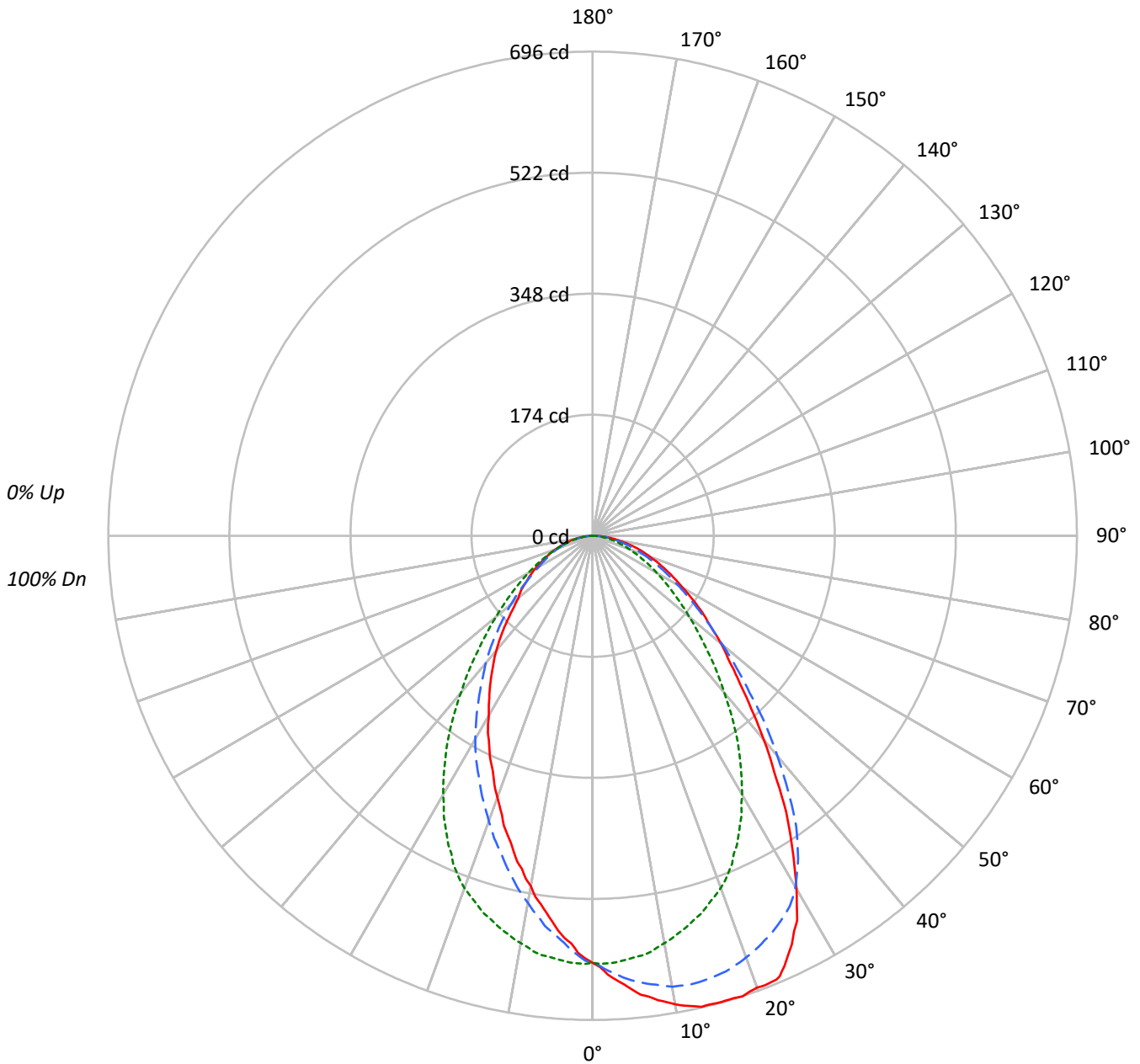
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1160.4 lumens
Efficiency: N/A
Efficacy: 82.9 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°	59452	59452	59452	59452	59452
5°	63706	62393	59359	56286	55401
10°	67285	64762	58491	52677	50287
15°	69714	65963	57137	48833	45734
20°	71258	66515	55546	44979	41247
25°	71071	66507	52462	41228	37358
30°	65562	65227	48067	37709	33368
35°	57346	60338	43048	33729	30228
40°	48448	52222	37230	30161	27253
45°	40964	43745	31867	26469	23852
50°	36337	36691	27324	23074	20994
55°	32513	31406	23629	19862	19761
60°	29024	27367	20615	17186	18581
65°	26659	24332	17926	15954	17009
70°	24557	21767	15805	14899	15805
75°	23132	19426	13774	13512	14523
80°	21255	17406	12106	12441	13222
85°	21230	15672	10226	10226	11671

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 44101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	5.0
10°-20°	161.3	13.9
20°-30°	230.1	19.8
30°-40°	237.2	20.4
40°-50°	190.9	16.5
50°-60°	135.0	11.6
60°-70°	87.5	7.5
70°-80°	47.0	4.1
80°-90°	13.6	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°	449.3	38.7
0°-40°	686.5	59.2
0°-60°	1012.4	87.2
0°-90°	1160.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1160.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	614	614	614	614	614	
5°	655	642	610	579	570	63
15°	695	658	570	487	456	197
25°	665	622	491	386	350	303
35°	485	510	364	285	256	301
45°	299	319	233	193	174	234
55°	192	186	140	118	117	172
65°	116	106	78	70	74	116
75°	62	52	37	36	39	66
85°	19	14	9	9	10	21
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°	613.7	613.7	613.7	613.7	613.7	613.7	613.7	613.7	613.7	613.7	613.7
1°	620.2	622.9	620.9	620.9	618.9	618.3	619.6	617.6	617.0	615.6	613.0
2°	631.4	629.4	628.8	629.4	625.5	625.5	623.5	619.6	617.6	615.0	607.8
3°	639.3	638.0	636.7	636.0	632.1	628.8	626.2	621.6	617.6	614.3	603.8
4°	646.5	646.5	645.2	642.6	638.6	634.7	629.4	624.2	618.3	612.4	598.6
5°	655.1	655.7	649.8	649.2	644.6	638.6	632.7	625.5	618.3	610.4	595.3
6°	663.6	660.3	659.0	654.4	647.8	642.6	635.4	627.5	617.6	608.4	588.0
7°	667.5	666.9	663.6	659.0	653.1	644.6	637.3	626.8	616.3	607.1	582.8
8°	674.1	674.1	670.2	664.3	655.7	647.8	638.6	626.2	615.6	603.8	575.6
9°	678.7	678.7	673.5	668.2	660.3	649.8	639.3	625.5	612.4	598.6	569.0
10°	684.0	682.7	678.7	670.8	664.3	652.4	639.3	624.8	610.4	594.6	562.4
11°	687.9	685.9	681.3	675.4	664.9	653.1	639.3	624.8	607.8	590.7	555.9
12°	691.2	689.9	684.0	676.7	666.2	654.4	638.6	622.2	603.2	585.4	547.3
13°	695.1	691.2	685.3	678.7	666.9	653.1	636.0	618.3	599.9	580.8	540.1
14°	694.5	693.8	688.6	679.4	666.2	651.8	635.4	614.3	595.3	575.6	531.5
15°	695.1	694.5	688.6	680.0	665.6	649.8	633.4	611.7	590.7	569.7	523.0
16°	695.1	695.1	687.3	678.7	664.9	647.8	629.4	609.1	586.1	565.1	515.8
17°	695.1	695.1	688.6	676.7	662.9	646.5	625.5	603.8	580.8	558.5	505.3
18°	696.5	694.5	685.9	676.1	660.3	643.2	622.9	599.9	576.2	551.3	498.0
19°	693.2	691.9	684.6	672.1	658.4	639.3	618.9	595.3	571.6	545.3	489.5
20°	691.2	693.2	683.3	670.2	654.4	636.0	615.0	590.7	565.1	538.8	481.0
21°	691.9	691.2	680.7	666.9	651.8	631.4	610.4	585.4	557.8	530.9	473.1
22.5°	690.5	688.6	677.4	662.3	643.9	625.5	602.5	576.9	547.3	517.1	458.0
23°	687.9	685.9	677.4	661.0	641.3	622.9	598.6	571.6	543.4	512.5	454.0
24°	677.4	676.7	672.8	656.4	638.0	617.6	594.0	563.1	531.5	499.3	444.2
25°	664.9	666.2	664.3	653.8	632.7	611.7	586.7	552.6	520.4	490.8	432.3
26°	653.1	653.1	651.8	647.8	627.5	605.1	576.2	540.1	509.2	478.3	419.8
27°	638.0	640.6	638.0	636.0	622.2	597.9	565.1	531.5	496.7	466.5	409.3
28°	626.2	626.2	624.8	621.6	617.0	589.4	553.2	519.1	484.9	456.0	397.5
29°	605.1	609.1	609.7	610.4	609.7	578.2	542.1	505.3	472.4	440.9	386.3
30°	586.1	590.0	592.6	597.2	597.9	568.3	528.9	494.1	460.6	429.7	376.5
32.5°	534.2	541.4	548.6	556.5	560.5	538.8	496.7	458.6	424.4	396.8	346.3
35°	484.9	486.9	494.7	513.1	517.1	503.3	458.6	422.5	390.3	364.0	318.0
37.5°	429.0	433.0	444.2	465.2	466.5	455.3	424.4	382.4	352.2	329.2	289.1
40°	383.1	385.0	392.9	410.6	416.6	409.3	382.4	344.3	316.7	294.4	261.5
42.5°	337.1	339.7	349.5	363.3	371.9	363.3	339.7	306.8	279.9	263.5	235.2
45°	299.0	302.2	311.4	319.3	321.9	316.7	295.7	268.7	249.7	232.6	210.9
47.5°	266.1	269.4	276.0	279.2	282.5	277.3	260.8	238.5	219.5	205.7	185.9
50°	241.1	240.5	245.1	246.4	246.4	240.5	226.7	208.3	192.5	181.3	164.9
52.5°	212.9	214.2	217.5	216.2	215.5	210.3	198.4	182.7	169.5	159.7	144.5
55°	192.5	190.5	192.5	191.2	188.6	183.3	172.8	159.7	148.5	139.9	126.2
57.5°	170.2	170.2	170.8	168.2	164.9	159.0	149.8	139.3	129.4	122.2	111.0
60°	149.8	151.1	150.5	147.8	144.5	138.0	130.8	120.2	111.7	106.4	95.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	101.8	101.8	99.9	97.9	93.3	87.4	82.1	75.6	71.0	66.4	59.8
70°	86.7	88.0	85.4	82.1	78.8	74.9	69.0	63.7	59.1	55.8	50.6
72.5°	74.9	74.2	72.3	69.0	66.4	61.8	56.5	52.6	48.6	46.0	42.1
75°	61.8	61.8	59.8	57.2	53.9	49.9	46.0	42.7	39.4	36.8	34.8
77.5°	49.3	49.9	48.0	46.0	43.4	39.4	36.1	33.5	30.9	28.9	27.6
80°	38.1	38.8	36.8	35.5	32.2	30.2	27.6	25.0	23.0	21.7	21.0
82.5°	28.9	28.3	26.9	26.3	23.7	21.7	19.1	17.7	16.4	15.1	15.1
85°	19.1	18.4	17.7	17.1	15.1	13.1	12.5	11.2	9.9	9.2	9.2
87.5°	9.9	9.9	9.2	8.5	7.9	6.6	5.9	4.6	3.9	3.9	3.9
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°	613.7	613.7	613.7
1°	611.0	608.4	607.8
2°	603.2	599.2	599.9
3°	595.9	591.3	586.7
4°	586.7	579.5	579.5
5°	578.8	571.6	569.7
6°	571.6	559.8	557.2
7°	565.1	550.6	546.0
8°	553.9	539.4	534.8
9°	546.0	530.2	525.6
10°	535.5	519.7	511.2
11°	526.9	509.2	502.6
12°	517.7	496.1	489.5
13°	507.2	484.9	481.0
14°	497.4	475.7	468.5
15°	486.9	464.5	456.0
16°	475.7	453.4	445.5
17°	466.5	441.5	435.6
18°	457.3	431.0	421.8
19°	446.1	421.2	410.6
20°	436.3	408.7	400.1
21°	425.8	399.5	390.3
22.5°	411.3	381.7	373.2
23°	406.7	376.5	367.3
24°	396.2	366.0	358.1
25°	385.7	358.1	349.5
26°	376.5	346.3	338.4
27°	367.3	337.1	328.5
28°	357.4	327.2	320.6
29°	347.6	316.7	310.1
30°	337.1	309.5	298.3
32.5°	310.8	285.8	276.6
35°	285.2	263.5	255.6
37.5°	260.2	242.4	235.2
40°	238.5	222.7	215.5
42.5°	216.2	201.7	194.5
45°	193.2	181.3	174.1
47.5°	172.1	162.3	154.4
50°	153.1	143.2	139.3
52.5°	134.7	128.1	130.1
55°	117.6	117.6	117.0
57.5°	101.2	105.8	106.4
60°	88.7	94.6	95.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	61.1	64.4	65.7
70°	52.6	55.2	55.8
72.5°	44.7	46.6	48.0
75°	36.1	38.8	38.8
77.5°	29.6	30.9	31.5
80°	22.3	23.0	23.7
82.5°	15.8	16.4	17.1
85°	9.2	9.9	10.5
87.5°	3.9	3.9	3.9
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°	132.7	134.0	132.1	128.8	125.5	119.6	113.0	103.8	97.2	92.0	82.8
65°	116.3	117.0	115.6	112.4	109.1	103.2	96.6	88.7	83.4	78.2	70.3

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62.5°	79.5	84.1	84.8
65°	69.6	73.6	74.2

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Scaled Data Report



(END OF REPORT)