

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: P838401

Luminaire Tested: HCSQ615D010-HM60525930-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838401
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-HM60525930-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

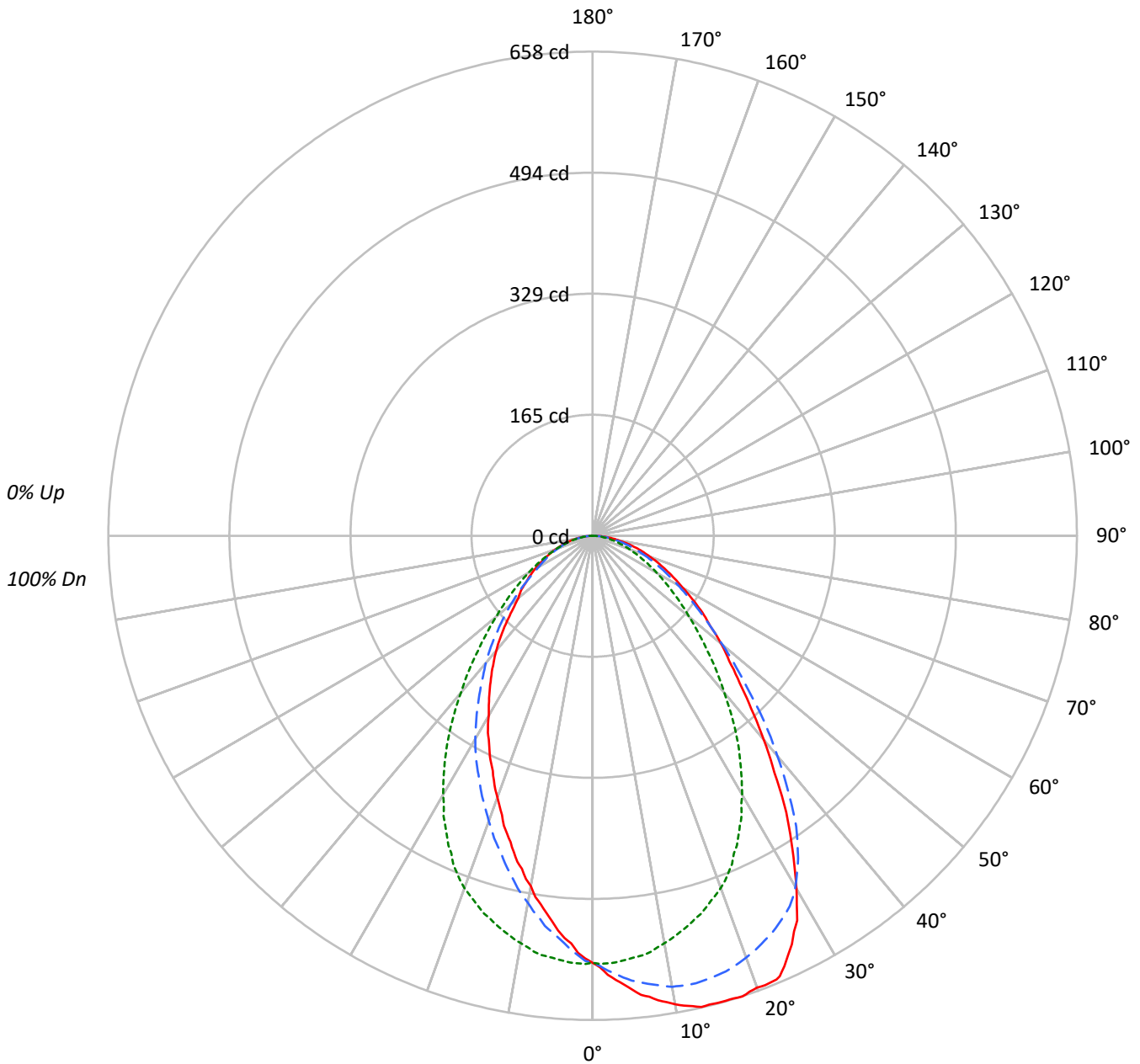
Lumens per Lamp: N/A
Luminaire Lumens: 1097.3 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	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	100	100	100		
	1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87	87	87	87	87	87		
	2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75	75	75		
	3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66	66	66	66	66	66		
	4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58	58	58	58	58	58		
	5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51	51	51	51	51	51		
	6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46	46	46	46	46	46		
	7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42	42	42	42	42	42		
	8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38	38	38	38	38	38		
	9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34	34	34	34	34	34		
	10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32	32	32	32	32	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	56217	56217	56217	56217	56217
5°	60234	58999	56120	53222	52376
10°	63616	61235	55304	49805	47542
15°	65922	62367	54018	46175	43246
20°	67381	62897	52515	42526	39000
25°	67202	62889	49608	38983	35327
30°	61994	61675	45450	35650	31556
35°	54224	57050	40706	31884	28584
40°	45804	49377	35194	28517	25773
45°	38731	41361	30127	25030	22551
50°	34362	34694	25847	21823	19849
55°	30739	29692	22345	18781	18680
60°	27435	25885	19491	16256	17573
65°	25215	22991	16940	15106	16092
70°	23226	20592	14955	14077	14955
75°	21859	18359	13026	12801	13737
80°	20084	16458	11437	11771	12497
85°	20007	14839	9670	9670	11004

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 41704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	5.0
10°-20°	152.5	13.9
20°-30°	217.6	19.8
30°-40°	224.2	20.4
40°-50°	180.5	16.5
50°-60°	127.6	11.6
60°-70°	82.7	7.5
70°-80°	44.4	4.1
80°-90°	12.8	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°	424.9	38.7
0°-40°	649.1	59.2
0°-60°	957.3	87.2
0°-90°	1097.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1097.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	580	580	580	580	580	
5°	619	607	577	547	539	60
15°	657	622	539	460	431	186
25°	629	588	464	365	330	286
35°	458	482	344	270	242	285
45°	283	302	220	183	165	221
55°	182	176	132	111	111	163
65°	110	100	74	66	70	110
75°	58	49	35	34	37	62
85°	18	13	9	9	10	20
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°	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3
1°	586.5	589.0	587.1	587.1	585.2	584.6	585.8	584.0	583.4	582.1	579.6
2°	597.0	595.2	594.5	595.2	591.4	591.4	589.6	585.8	584.0	581.5	574.7
3°	604.5	603.2	602.0	601.4	597.7	594.5	592.1	587.7	584.0	580.9	570.9
4°	611.3	611.3	610.1	607.6	603.9	600.1	595.2	590.2	584.6	579.0	566.0
5°	619.4	620.0	614.4	613.8	609.5	603.9	598.3	591.4	584.6	577.1	562.9
6°	627.5	624.4	623.1	618.8	612.6	607.6	600.8	593.3	584.0	575.3	556.0
7°	631.2	630.6	627.5	623.1	617.5	609.5	602.6	592.7	582.7	574.0	551.1
8°	637.4	637.4	633.7	628.1	620.0	612.6	603.9	592.1	582.1	570.9	544.2
9°	641.8	641.8	636.8	631.8	624.4	614.4	604.5	591.4	579.0	566.0	538.0
10°	646.7	645.5	641.8	634.3	628.1	616.9	604.5	590.8	577.1	562.2	531.8
11°	650.5	648.6	644.2	638.7	628.7	617.5	604.5	590.8	574.7	558.5	525.6
12°	653.6	652.3	646.7	639.9	630.0	618.8	603.9	588.3	570.3	553.5	517.5
13°	657.3	653.6	648.0	641.8	630.6	617.5	601.4	584.6	567.2	549.2	510.7
14°	656.7	656.0	651.1	642.4	630.0	616.3	600.8	580.9	562.9	544.2	502.6
15°	657.3	656.7	651.1	643.0	629.3	614.4	598.9	578.4	558.5	538.6	494.5
16°	657.3	657.3	649.8	641.8	628.7	612.6	595.2	575.9	554.2	534.3	487.7
17°	657.3	657.3	651.1	639.9	626.9	611.3	591.4	570.9	549.2	528.1	477.7
18°	658.5	656.7	648.6	639.3	624.4	608.2	589.0	567.2	544.8	521.2	470.9
19°	655.4	654.2	647.4	635.5	622.5	604.5	585.2	562.9	540.5	515.6	462.8
20°	653.6	655.4	646.1	633.7	618.8	601.4	581.5	558.5	534.3	509.4	454.8
21°	654.2	653.6	643.6	630.6	616.3	597.0	577.1	553.5	527.4	502.0	447.3
22.5°	652.9	651.1	640.5	626.2	608.8	591.4	569.7	545.5	517.5	488.9	433.0
23°	650.5	648.6	640.5	625.0	606.3	589.0	566.0	540.5	513.8	484.6	429.3
24°	640.5	639.9	636.2	620.6	603.2	584.0	561.6	532.4	502.6	472.2	420.0
25°	628.7	630.0	628.1	618.2	598.3	578.4	554.8	522.5	492.0	464.1	408.8
26°	617.5	617.5	616.3	612.6	593.3	572.2	544.8	510.7	481.5	452.3	397.0
27°	603.2	605.7	603.2	601.4	588.3	565.3	534.3	502.6	469.7	441.1	387.0
28°	592.1	592.1	590.8	587.7	583.4	557.3	523.1	490.8	458.5	431.2	375.9
29°	572.2	575.9	576.5	577.1	576.5	546.7	512.5	477.7	446.7	416.9	365.3
30°	554.2	557.9	560.4	564.7	565.3	537.4	500.1	467.2	435.5	406.3	356.0
32.5°	505.1	511.9	518.8	526.2	529.9	509.4	469.7	433.6	401.3	375.2	327.4
35°	458.5	460.4	467.8	485.2	488.9	475.9	433.6	399.5	369.0	344.2	300.7
37.5°	405.7	409.4	420.0	439.9	441.1	430.5	401.3	361.6	333.0	311.3	273.4
40°	362.2	364.1	371.5	388.3	393.9	387.0	361.6	325.5	299.4	278.3	247.3
42.5°	318.7	321.2	330.5	343.6	351.6	343.6	321.2	290.1	264.7	249.1	222.4
45°	282.7	285.8	294.5	301.9	304.4	299.4	279.6	254.1	236.1	219.9	199.4
47.5°	251.6	254.7	260.9	264.0	267.1	262.2	246.6	225.5	207.5	194.5	175.8
50°	228.0	227.4	231.7	233.0	233.0	227.4	214.3	196.9	182.0	171.5	155.9
52.5°	201.3	202.5	205.6	204.4	203.8	198.8	187.6	172.7	160.3	151.0	136.7
55°	182.0	180.2	182.0	180.8	178.3	173.3	163.4	151.0	140.4	132.3	119.3
57.5°	160.9	160.9	161.5	159.0	155.9	150.3	141.6	131.7	122.4	115.6	105.0
60°	141.6	142.9	142.3	139.8	136.7	130.5	123.6	113.7	105.6	100.6	90.7



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	96.3	96.3	94.4	92.6	88.2	82.6	77.7	71.4	67.1	62.7	56.5
70°	82.0	83.2	80.8	77.7	74.6	70.8	65.2	60.3	55.9	52.8	47.8
72.5°	70.8	70.2	68.3	65.2	62.7	58.4	53.4	49.7	46.0	43.5	39.8
75°	58.4	58.4	56.5	54.0	50.9	47.2	43.5	40.4	37.3	34.8	32.9
77.5°	46.6	47.2	45.4	43.5	41.0	37.3	34.2	31.7	29.2	27.3	26.1
80°	36.0	36.7	34.8	33.5	30.4	28.6	26.1	23.6	21.7	20.5	19.9
82.5°	27.3	26.7	25.5	24.9	22.4	20.5	18.0	16.8	15.5	14.3	14.3
85°	18.0	17.4	16.8	16.2	14.3	12.4	11.8	10.6	9.3	8.7	8.7
87.5°	9.3	9.3	8.7	8.1	7.5	6.2	5.6	4.3	3.7	3.7	3.7
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°	580.3	580.3	580.3
1°	577.8	575.3	574.7
2°	570.3	566.6	567.2
3°	563.5	559.1	554.8
4°	554.8	548.0	548.0
5°	547.3	540.5	538.6
6°	540.5	529.3	526.8
7°	534.3	520.6	516.3
8°	523.7	510.1	505.7
9°	516.3	501.4	497.0
10°	506.3	491.4	483.3
11°	498.3	481.5	475.3
12°	489.6	469.1	462.8
13°	479.6	458.5	454.8
14°	470.3	449.8	443.0
15°	460.4	439.2	431.2
16°	449.8	428.7	421.2
17°	441.1	417.5	411.9
18°	432.4	407.5	398.8
19°	421.8	398.2	388.3
20°	412.5	386.4	378.3
21°	402.6	377.7	369.0
22.5°	388.9	361.0	352.9
23°	384.6	356.0	347.3
24°	374.6	346.0	338.6
25°	364.7	338.6	330.5
26°	356.0	327.4	319.9
27°	347.3	318.7	310.6
28°	338.0	309.4	303.2
29°	328.6	299.4	293.2
30°	318.7	292.6	282.1
32.5°	293.9	270.2	261.6
35°	269.6	249.1	241.7
37.5°	246.0	229.2	222.4
40°	225.5	210.6	203.8
42.5°	204.4	190.7	183.9
45°	182.7	171.5	164.6
47.5°	162.8	153.5	146.0
50°	144.8	135.4	131.7
52.5°	127.4	121.1	123.0
55°	111.2	111.2	110.6
57.5°	95.7	100.0	100.6
60°	83.9	89.5	90.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	57.8	60.9	62.1
70°	49.7	52.2	52.8
72.5°	42.2	44.1	45.4
75°	34.2	36.7	36.7
77.5°	28.0	29.2	29.8
80°	21.1	21.7	22.4
82.5°	14.9	15.5	16.2
85°	8.7	9.3	9.9
87.5°	3.7	3.7	3.7
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°	125.5	126.7	124.9	121.8	118.7	113.1	106.9	98.2	91.9	87.0	78.3
65°	110.0	110.6	109.3	106.2	103.1	97.5	91.3	83.9	78.9	73.9	66.5

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Scaled Data Report



62.5°	75.2	79.5	80.1
65°	65.9	69.6	70.2

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Scaled Data Report



(END OF REPORT)