

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: P838451

Luminaire Tested: HCSQ620D010-HM60525940-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838451
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: HCSQ620D010-HM60525940-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

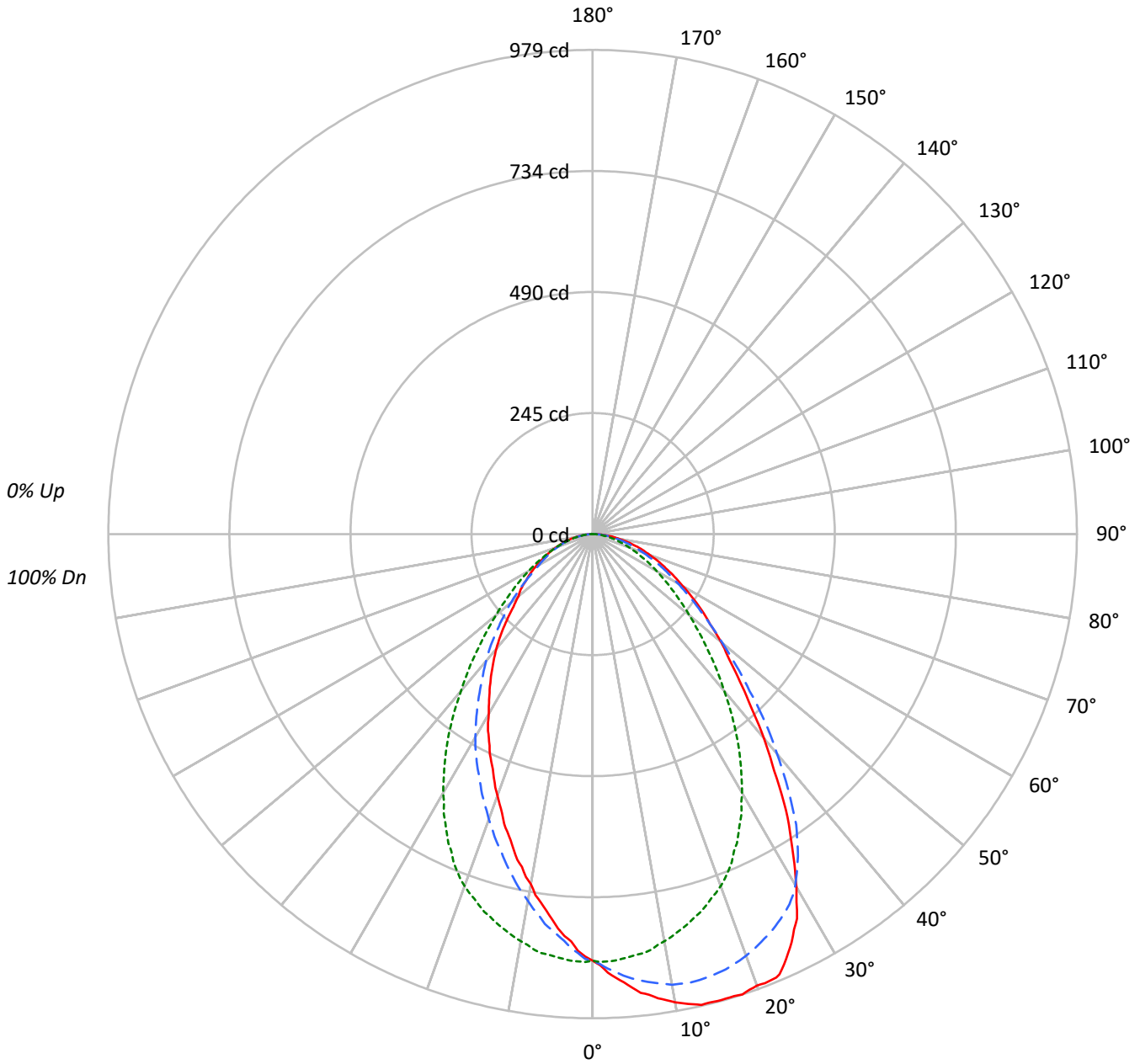
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1631.3 lumens
Efficiency: N/A
Efficacy: 81.6 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): 20
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°	83565	83565	83565	83565	83565
5°	89544	87706	83437	79129	77874
10°	94583	91036	82227	74043	70689
15°	98006	92721	80314	68640	64288
20°	100165	93505	78082	63227	57990
25°	99910	93492	73744	57956	52526
30°	92163	91693	67565	53000	46904
35°	80608	84818	60515	47400	42492
40°	68100	73411	52330	42403	38305
45°	57568	61500	44800	37196	33538
50°	51091	51573	38416	32433	29509
55°	45704	44150	33222	27919	27767
60°	40804	38479	28985	24161	26118
65°	37479	34189	25192	22441	23931
70°	34528	30605	22235	20932	22235
75°	32489	27305	19351	19014	20399
80°	29903	24491	17015	17518	18522
85°	29789	22064	14339	14339	16451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 62007 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	5.0
10°-20°	226.8	13.9
20°-30°	323.5	19.8
30°-40°	333.4	20.4
40°-50°	268.4	16.5
50°-60°	189.8	11.6
60°-70°	123.0	7.5
70°-80°	66.1	4.1
80°-90°	19.1	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°	631.6	38.7
0°-40°	965.0	59.2
0°-60°	1423.1	87.2
0°-90°	1631.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1631.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	863	863	863	863	863	
5°	921	902	858	814	801	89
15°	977	924	801	684	641	276
25°	935	875	690	542	491	426
35°	682	717	512	401	359	423
45°	420	449	327	272	245	328
55°	271	261	197	165	164	242
65°	164	149	110	98	104	163
75°	87	73	52	51	54	92
85°	27	20	13	13	15	29
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°	862.6	862.6	862.6	862.6	862.6	862.6	862.6	862.6	862.6	862.6	862.6
1°	871.9	875.6	872.8	872.8	870.0	869.1	871.0	868.2	867.3	865.4	861.7
2°	887.6	884.8	883.9	884.8	879.3	879.3	876.5	871.0	868.2	864.5	854.3
3°	898.7	896.8	895.0	894.1	888.5	883.9	880.2	873.7	868.2	863.6	848.8
4°	908.8	908.8	907.0	903.3	897.7	892.2	884.8	877.4	869.1	860.8	841.4
5°	920.8	921.8	913.4	912.5	906.1	897.7	889.4	879.3	869.1	858.0	836.8
6°	932.8	928.2	926.4	919.9	910.7	903.3	893.1	882.0	868.2	855.3	826.6
7°	938.4	937.5	932.8	926.4	918.1	906.1	895.9	881.1	866.3	853.4	819.2
8°	947.6	947.6	942.1	933.8	921.8	910.7	897.7	880.2	865.4	848.8	809.1
9°	954.1	954.1	946.7	939.3	928.2	913.4	898.7	879.3	860.8	841.4	799.8
10°	961.5	959.6	954.1	943.0	933.8	917.1	898.7	878.3	858.0	835.9	790.6
11°	967.0	964.2	957.8	949.5	934.7	918.1	898.7	878.3	854.3	830.3	781.4
12°	971.6	969.8	961.5	951.3	936.5	919.9	897.7	874.7	847.9	822.9	769.4
13°	977.2	971.6	963.3	954.1	937.5	918.1	894.1	869.1	843.3	816.5	759.2
14°	976.3	975.3	967.9	955.0	936.5	916.2	893.1	863.6	836.8	809.1	747.2
15°	977.2	976.3	967.9	955.9	935.6	913.4	890.4	859.9	830.3	800.8	735.2
16°	977.2	977.2	966.1	954.1	934.7	910.7	884.8	856.2	823.9	794.3	725.0
17°	977.2	977.2	967.9	951.3	931.9	908.8	879.3	848.8	816.5	785.1	710.3
18°	979.0	976.3	964.2	950.4	928.2	904.2	875.6	843.3	810.0	774.9	700.1
19°	974.4	972.6	962.4	944.8	925.5	898.7	870.0	836.8	803.5	766.6	688.1
20°	971.6	974.4	960.6	942.1	919.9	894.1	864.5	830.3	794.3	757.4	676.1
21°	972.6	971.6	956.9	937.5	916.2	887.6	858.0	822.9	784.1	746.3	665.0
22.5°	970.7	967.9	952.2	931.0	905.1	879.3	846.9	810.9	769.4	726.9	643.8
23°	967.0	964.2	952.2	929.1	901.4	875.6	841.4	803.5	763.8	720.4	638.2
24°	952.2	951.3	945.8	922.7	896.8	868.2	834.9	791.5	747.2	701.9	624.4
25°	934.7	936.5	933.8	919.0	889.4	859.9	824.8	776.8	731.5	689.9	607.7
26°	918.1	918.1	916.2	910.7	882.0	850.6	810.0	759.2	715.8	672.4	590.2
27°	896.8	900.5	896.8	894.1	874.7	840.5	794.3	747.2	698.2	655.8	575.4
28°	880.2	880.2	878.3	873.7	867.3	828.5	777.7	729.6	681.6	641.0	558.8
29°	850.6	856.2	857.1	858.0	857.1	812.8	762.0	710.3	664.1	619.7	543.1
30°	823.9	829.4	833.1	839.6	840.5	798.9	743.5	694.6	647.4	604.0	529.2
32.5°	750.9	761.1	771.2	782.3	787.8	757.4	698.2	644.7	596.6	557.9	486.7
35°	681.6	684.4	695.5	721.3	726.9	707.5	644.7	593.9	548.6	511.7	447.0
37.5°	603.1	608.7	624.4	653.9	655.8	640.1	596.6	537.5	495.1	462.7	406.4
40°	538.5	541.2	552.3	577.3	585.6	575.4	537.5	484.0	445.2	413.8	367.6
42.5°	473.8	477.5	491.4	510.8	522.8	510.8	477.5	431.3	393.5	370.4	330.7
45°	420.2	424.9	437.8	448.9	452.6	445.2	415.6	377.8	351.0	327.0	296.5
47.5°	374.1	378.7	387.9	392.5	397.2	389.8	366.7	335.3	308.5	289.1	261.4
50°	339.0	338.0	344.5	346.4	346.4	338.0	318.6	292.8	270.6	254.9	231.8
52.5°	299.2	301.1	305.7	303.9	302.9	295.6	278.9	256.8	238.3	224.4	203.2
55°	270.6	267.8	270.6	268.8	265.1	257.7	242.9	224.4	208.7	196.7	177.3
57.5°	239.2	239.2	240.1	236.4	231.8	223.5	210.6	195.8	182.0	171.8	156.1
60°	210.6	212.4	211.5	207.8	203.2	194.0	183.8	169.0	157.0	149.6	134.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	143.2	143.2	140.4	137.6	131.2	122.8	115.5	106.2	99.7	93.3	84.0
70°	121.9	123.8	120.1	115.5	110.8	105.3	97.0	89.6	83.1	78.5	71.1
72.5°	105.3	104.4	101.6	97.0	93.3	86.8	79.4	73.9	68.3	64.7	59.1
75°	86.8	86.8	84.0	80.4	75.7	70.2	64.7	60.0	55.4	51.7	49.0
77.5°	69.3	70.2	67.4	64.7	61.0	55.4	50.8	47.1	43.4	40.6	38.8
80°	53.6	54.5	51.7	49.9	45.3	42.5	38.8	35.1	32.3	30.5	29.6
82.5°	40.6	39.7	37.9	36.9	33.2	30.5	26.8	24.9	23.1	21.2	21.2
85°	26.8	25.9	24.9	24.0	21.2	18.5	17.5	15.7	13.9	12.9	12.9
87.5°	13.9	13.9	12.9	12.0	11.1	9.2	8.3	6.5	5.5	5.5	5.5
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°	862.6	862.6	862.6
1°	859.0	855.3	854.3
2°	847.9	842.3	843.3
3°	837.7	831.2	824.8
4°	824.8	814.6	814.6
5°	813.7	803.5	800.8
6°	803.5	786.9	783.2
7°	794.3	774.0	767.5
8°	778.6	758.3	751.8
9°	767.5	745.3	738.9
10°	752.7	730.6	718.6
11°	740.7	715.8	706.6
12°	727.8	697.3	688.1
13°	713.0	681.6	676.1
14°	699.2	668.7	658.5
15°	684.4	653.0	641.0
16°	668.7	637.3	626.2
17°	655.8	620.7	612.4
18°	642.8	605.9	593.0
19°	627.1	592.0	577.3
20°	613.3	574.5	562.5
21°	598.5	561.6	548.6
22.5°	578.2	536.6	524.6
23°	571.7	529.2	516.3
24°	556.9	514.4	503.4
25°	542.2	503.4	491.4
26°	529.2	486.7	475.7
27°	516.3	473.8	461.8
28°	502.4	460.0	450.7
29°	488.6	445.2	435.9
30°	473.8	435.0	419.3
32.5°	436.9	401.8	388.8
35°	400.8	370.4	359.3
37.5°	365.7	340.8	330.7
40°	335.3	313.1	302.9
42.5°	303.9	283.5	273.4
45°	271.5	254.9	244.8
47.5°	242.0	228.1	217.0
50°	215.2	201.3	195.8
52.5°	189.3	180.1	182.9
55°	165.3	165.3	164.4
57.5°	142.2	148.7	149.6
60°	124.7	133.0	134.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	85.9	90.5	92.4
70°	73.9	77.6	78.5
72.5°	62.8	65.6	67.4
75°	50.8	54.5	54.5
77.5°	41.6	43.4	44.3
80°	31.4	32.3	33.2
82.5°	22.2	23.1	24.0
85°	12.9	13.9	14.8
87.5°	5.5	5.5	5.5
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°	186.6	188.4	185.6	181.0	176.4	168.1	158.9	145.9	136.7	129.3	116.4
65°	163.5	164.4	162.6	157.9	153.3	145.0	135.8	124.7	117.3	109.9	98.8

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62.5°	111.8	118.2	119.1
65°	97.9	103.4	104.4

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Scaled Data Report



(END OF REPORT)