

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: P838436

Luminaire Tested: HCSQ620D010-HM60525927-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838436
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-HM60525927-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

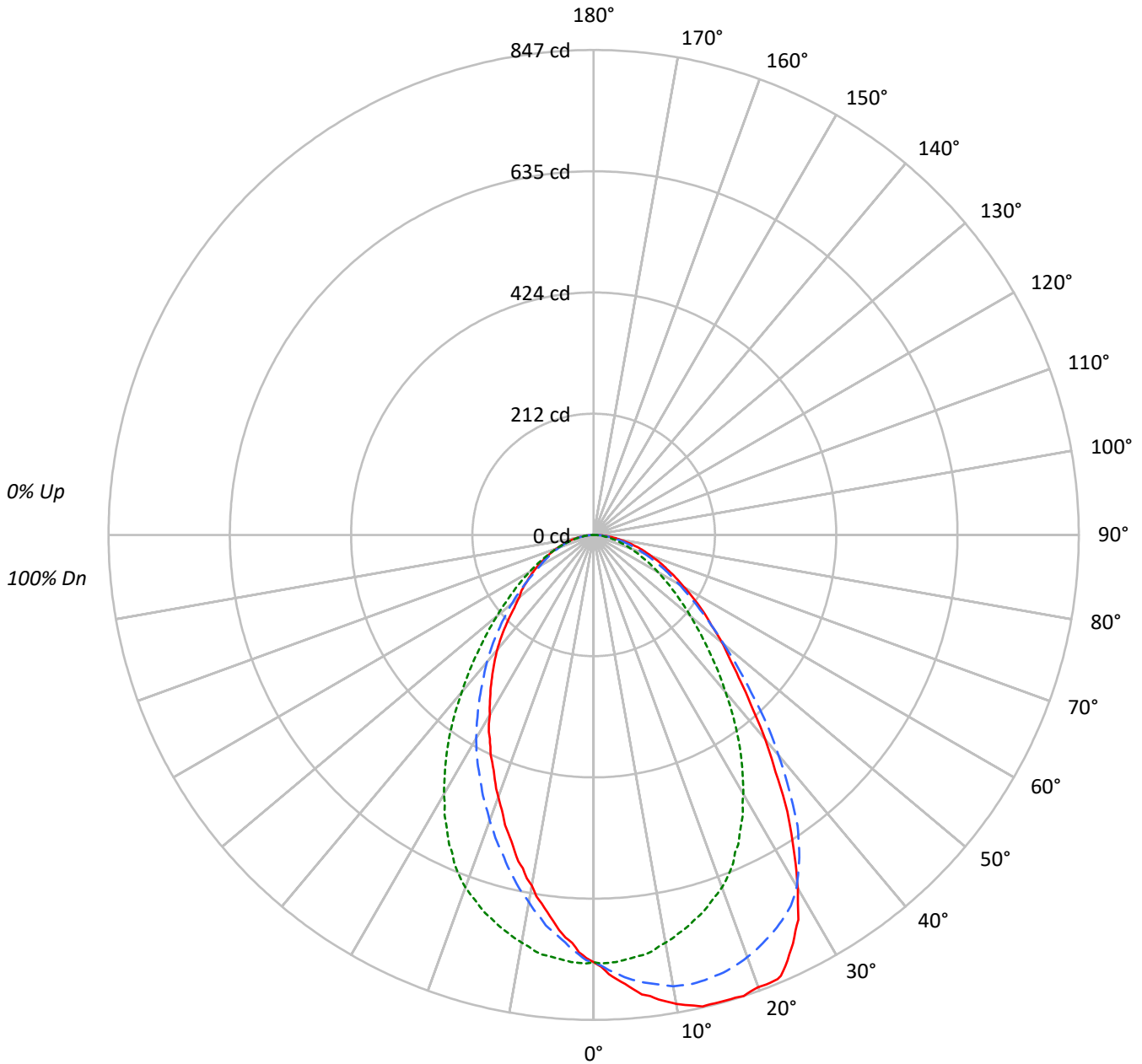
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1411.1 lumens
Efficiency: N/A
Efficacy: 70.6 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°	72288	72288	72288	72288	72288
5°	77456	75871	72176	68451	67362
10°	81814	78745	71121	64049	61147
15°	84778	80204	69473	59373	55612
20°	86649	80881	67536	54691	50165
25°	86421	80873	63792	50132	45428
30°	79724	79316	58448	45852	40572
35°	69728	73370	52343	41002	36756
40°	58906	63497	45261	36674	33146
45°	49800	53198	38744	32182	29003
50°	44189	44611	33232	28062	25531
55°	39539	38188	28746	24152	24017
60°	35301	33286	25071	20906	22591
65°	32413	29570	21799	19416	20699
70°	29882	26483	19232	18099	19232
75°	28110	23618	16731	16432	17629
80°	25830	21172	14728	15174	16067
85°	25787	19118	12449	12449	14227

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 53636 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	5.0
10°-20°	196.2	13.9
20°-30°	279.8	19.8
30°-40°	288.4	20.4
40°-50°	232.1	16.5
50°-60°	164.1	11.6
60°-70°	106.4	7.5
70°-80°	57.1	4.0
80°-90°	16.5	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°	546.4	38.7
0°-40°	834.7	59.2
0°-60°	1231.0	87.2
0°-90°	1411.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1411.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	746	746	746	746	746	
5°	796	780	742	704	693	77
15°	845	800	693	592	554	239
25°	808	757	597	469	425	368
35°	590	620	443	347	311	366
45°	364	388	283	235	212	284
55°	234	226	170	143	142	209
65°	141	129	95	85	90	141
75°	75	63	45	44	47	80
85°	23	17	11	11	13	25
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°	746.2	746.2	746.2	746.2	746.2	746.2	746.2	746.2	746.2	746.2	746.2
1°	754.2	757.4	755.0	755.0	752.6	751.8	753.4	751.0	750.2	748.6	745.4
2°	767.8	765.4	764.6	765.4	760.6	760.6	758.2	753.4	751.0	747.8	739.0
3°	777.4	775.8	774.2	773.4	768.6	764.6	761.4	755.8	751.0	747.0	734.2
4°	786.2	786.2	784.6	781.4	776.6	771.8	765.4	759.0	751.8	744.6	727.8
5°	796.5	797.3	790.1	789.3	783.8	776.6	769.4	760.6	751.8	742.2	723.8
6°	806.9	802.9	801.3	795.7	787.8	781.4	772.6	763.0	751.0	739.8	715.0
7°	811.7	810.9	806.9	801.3	794.1	783.8	775.0	762.2	749.4	738.2	708.7
8°	819.7	819.7	814.9	807.7	797.3	787.8	776.6	761.4	748.6	734.2	699.9
9°	825.3	825.3	818.9	812.5	802.9	790.1	777.4	760.6	744.6	727.8	691.9
10°	831.7	830.1	825.3	815.7	807.7	793.3	777.4	759.8	742.2	723.0	683.9
11°	836.5	834.1	828.5	821.3	808.5	794.1	777.4	759.8	739.0	718.2	675.9
12°	840.5	838.9	831.7	822.9	810.1	795.7	776.6	756.6	733.4	711.9	665.5
13°	845.3	840.5	833.3	825.3	810.9	794.1	773.4	751.8	729.4	706.3	656.7
14°	844.5	843.7	837.3	826.1	810.1	792.5	772.6	747.0	723.8	699.9	646.3
15°	845.3	844.5	837.3	826.9	809.3	790.1	770.2	743.8	718.2	692.7	636.0
16°	845.3	845.3	835.7	825.3	808.5	787.8	765.4	740.6	712.7	687.1	627.2
17°	845.3	845.3	837.3	822.9	806.1	786.2	760.6	734.2	706.3	679.1	614.4
18°	846.9	844.5	834.1	822.1	802.9	782.2	757.4	729.4	700.7	670.3	605.6
19°	842.9	841.3	832.5	817.3	800.5	777.4	752.6	723.8	695.1	663.1	595.2
20°	840.5	842.9	830.9	814.9	795.7	773.4	747.8	718.2	687.1	655.1	584.8
21°	841.3	840.5	827.7	810.9	792.5	767.8	742.2	711.9	678.3	645.5	575.2
22.5°	839.7	837.3	823.7	805.3	783.0	760.6	732.6	701.5	665.5	628.8	556.9
23°	836.5	834.1	823.7	803.7	779.8	757.4	727.8	695.1	660.7	623.2	552.1
24°	823.7	822.9	818.1	798.1	775.8	751.0	722.2	684.7	646.3	607.2	540.1
25°	808.5	810.1	807.7	794.9	769.4	743.8	713.4	671.9	632.8	596.8	525.7
26°	794.1	794.1	792.5	787.8	763.0	735.8	700.7	656.7	619.2	581.6	510.5
27°	775.8	779.0	775.8	773.4	756.6	727.0	687.1	646.3	604.0	567.2	497.7
28°	761.4	761.4	759.8	755.8	750.2	716.6	672.7	631.2	589.6	554.5	483.4
29°	735.8	740.6	741.4	742.2	741.4	703.1	659.1	614.4	574.4	536.1	469.8
30°	712.7	717.4	720.6	726.2	727.0	691.1	643.1	600.8	560.1	522.5	457.8
32.5°	649.5	658.3	667.1	676.7	681.5	655.1	604.0	557.7	516.1	482.6	421.0
35°	589.6	592.0	601.6	624.0	628.8	612.0	557.7	513.7	474.6	442.6	386.7
37.5°	521.7	526.5	540.1	565.6	567.2	553.7	516.1	465.0	428.2	400.3	351.5
40°	465.8	468.2	477.8	499.3	506.5	497.7	465.0	418.6	385.1	357.9	318.0
42.5°	409.9	413.0	425.0	441.8	452.2	441.8	413.0	373.1	340.3	320.4	286.0
45°	363.5	367.5	378.7	388.3	391.5	385.1	359.5	326.8	303.6	282.8	256.5
47.5°	323.6	327.6	335.6	339.5	343.5	337.2	317.2	290.0	266.8	250.1	226.1
50°	293.2	292.4	298.0	299.6	299.6	292.4	275.6	253.3	234.1	220.5	200.5
52.5°	258.9	260.5	264.4	262.8	262.1	255.7	241.3	222.1	206.1	194.1	175.8
55°	234.1	231.7	234.1	232.5	229.3	222.9	210.1	194.1	180.6	170.2	153.4
57.5°	206.9	206.9	207.7	204.5	200.5	193.3	182.2	169.4	157.4	148.6	135.0
60°	182.2	183.8	183.0	179.8	175.8	167.8	159.0	146.2	135.8	129.4	116.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	<i>123.8</i>	123.8	121.4	119.0	113.4	106.3	99.9	91.9	86.3	80.7	72.7
70°	<i>105.5</i>	107.1	103.9	99.9	95.9	91.1	83.9	77.5	71.9	67.9	61.5
72.5°	<i>91.1</i>	90.3	87.9	83.9	80.7	75.1	68.7	63.9	59.1	55.9	51.1
75°	<i>75.1</i>	75.1	72.7	69.5	65.5	60.7	55.9	51.9	47.9	44.7	42.3
77.5°	<i>59.9</i>	60.7	58.3	55.9	52.7	47.9	43.9	40.7	37.5	35.2	33.6
80°	<i>46.3</i>	47.1	44.7	43.1	39.1	36.8	33.6	30.4	28.0	26.4	25.6
82.5°	<i>35.2</i>	34.4	32.8	32.0	28.8	26.4	23.2	21.6	20.0	18.4	18.4
85°	<i>23.2</i>	22.4	21.6	20.8	18.4	16.0	15.2	13.6	12.0	11.2	11.2
87.5°	<i>12.0</i>	12.0	11.2	10.4	9.6	8.0	7.2	5.6	4.8	4.8	4.8
90°	<i>0.0</i>	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°	746.2	746.2	746.2
1°	743.0	739.8	739.0
2°	733.4	728.6	729.4
3°	724.6	719.0	713.4
4°	713.4	704.7	704.7
5°	703.9	695.1	692.7
6°	695.1	680.7	677.5
7°	687.1	669.5	663.9
8°	673.5	655.9	650.3
9°	663.9	644.7	639.1
10°	651.1	632.0	621.6
11°	640.7	619.2	611.2
12°	629.6	603.2	595.2
13°	616.8	589.6	584.8
14°	604.8	578.4	569.6
15°	592.0	564.8	554.5
16°	578.4	551.3	541.7
17°	567.2	536.9	529.7
18°	556.1	524.1	512.9
19°	542.5	512.1	499.3
20°	530.5	496.9	486.6
21°	517.7	485.8	474.6
22.5°	500.1	464.2	453.8
23°	494.5	457.8	446.6
24°	481.8	445.0	435.4
25°	469.0	435.4	425.0
26°	457.8	421.0	411.5
27°	446.6	409.9	399.5
28°	434.6	397.9	389.9
29°	422.6	385.1	377.1
30°	409.9	376.3	362.7
32.5°	377.9	347.5	336.4
35°	346.7	320.4	310.8
37.5°	316.4	294.8	286.0
40°	290.0	270.8	262.1
42.5°	262.8	245.3	236.5
45°	234.9	220.5	211.7
47.5°	209.3	197.3	187.7
50°	186.2	174.2	169.4
52.5°	163.8	155.8	158.2
55°	143.0	143.0	142.2
57.5°	123.0	128.6	129.4
60°	107.9	115.0	116.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	74.3	78.3	79.9
70°	63.9	67.1	67.9
72.5°	54.3	56.7	58.3
75°	43.9	47.1	47.1
77.5°	36.0	37.5	38.3
80°	27.2	28.0	28.8
82.5°	19.2	20.0	20.8
85°	11.2	12.0	12.8
87.5°	4.8	4.8	4.8
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°	161.4	163.0	160.6	156.6	152.6	145.4	137.4	126.2	118.2	111.9	100.7
65°	141.4	142.2	140.6	136.6	132.6	125.4	117.4	107.9	101.5	95.1	85.5

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62.5°	96.7	102.3	103.1
65°	84.7	89.5	90.3

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Scaled Data Report



(END OF REPORT)