

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: P838351

Luminaire Tested: HCSQ610D010-HM60525840-61SQLWW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838351
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: HCSQ610D010-HM60525840-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

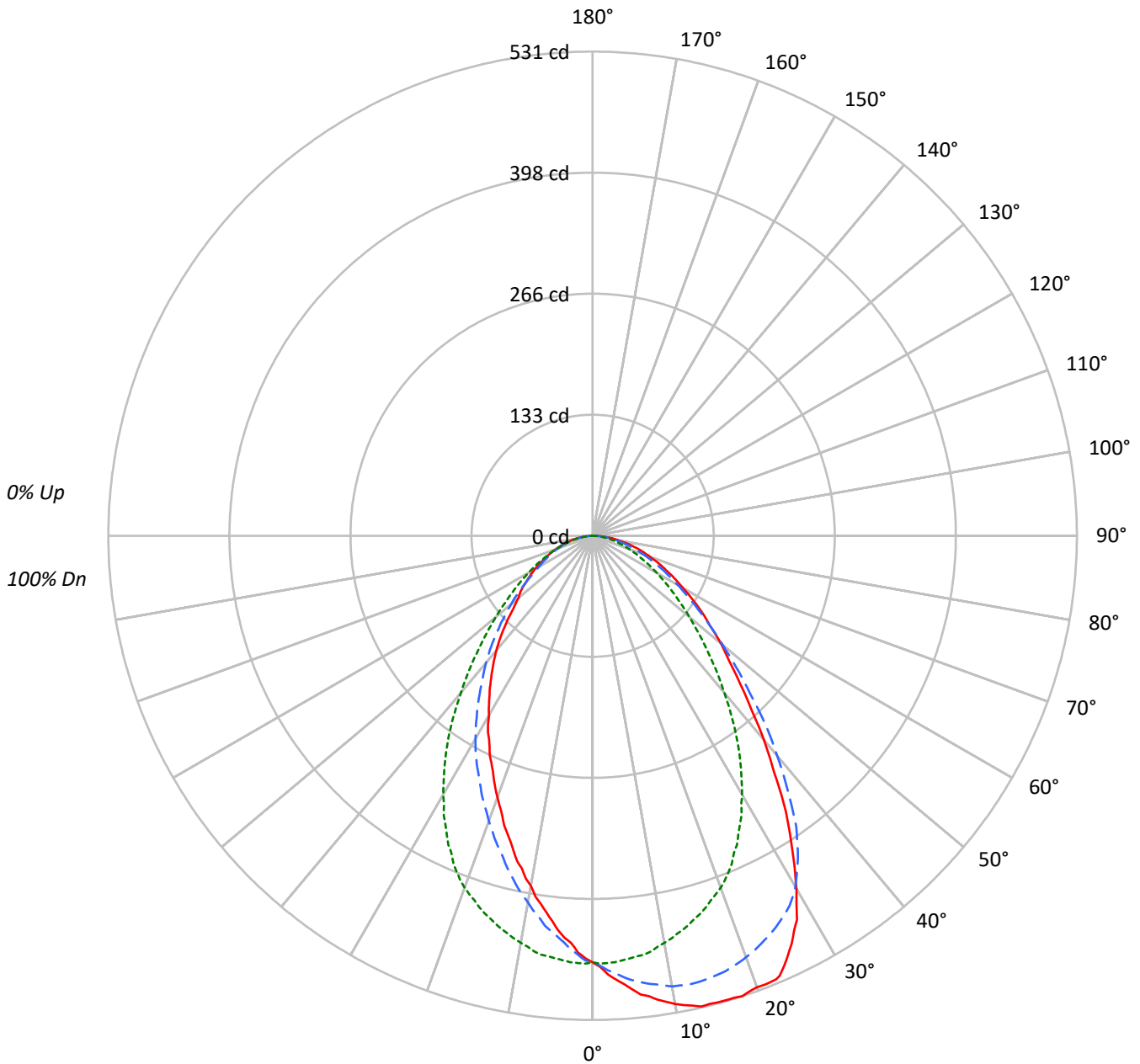
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 884.6 lumens
Efficiency: N/A
Efficacy: 89.4 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): 9.9
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°	45318	45318	45318	45318	45318
5°	48564	47563	45248	42914	42234
10°	51290	49372	44591	40155	38335
15°	53145	50287	43557	37219	34862
20°	54320	50706	42340	34289	31443
25°	54183	50698	39998	31426	28486
30°	49980	49728	36646	28737	25437
35°	43710	45998	32818	25710	23038
40°	36927	39810	28378	22991	20778
45°	31223	33346	24291	20180	18180
50°	27701	27965	20828	17588	16006
55°	24794	23941	18021	15150	15066
60°	22126	20867	15713	13098	14163
65°	20332	18533	13662	12172	12974
70°	18722	16598	12066	11358	12066
75°	17629	14822	10480	10293	11079
80°	16234	13250	9205	9484	10042
85°	16117	11949	7781	7781	8892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°

Vertical Angle: 45°

Luminance: 33620 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	5.0
10°-20°	123.0	13.9
20°-30°	175.4	19.8
30°-40°	180.8	20.4
40°-50°	145.5	16.5
50°-60°	102.9	11.6
60°-70°	66.7	7.5
70°-80°	35.8	4.1
80°-90°	10.3	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°	342.5	38.7
0°-40°	523.3	59.2
0°-60°	771.8	87.2
0°-90°	884.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	884.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	468	468	468	468	468	
5°	499	489	465	441	434	48
15°	530	501	434	371	348	150
25°	507	474	374	294	266	231
35°	370	389	278	217	195	229
45°	228	243	177	147	133	178
55°	147	142	107	90	89	131
65°	89	81	60	53	57	88
75°	47	40	28	28	30	50
85°	14	11	7	7	8	16
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°	467.8	467.8	467.8	467.8	467.8	467.8	467.8	467.8	467.8	467.8	467.8
1°	472.8	474.8	473.3	473.3	471.8	471.3	472.3	470.8	470.3	469.3	467.3
2°	481.3	479.8	479.3	479.8	476.8	476.8	475.3	472.3	470.8	468.8	463.3
3°	487.3	486.3	485.3	484.8	481.8	479.3	477.3	473.8	470.8	468.3	460.3
4°	492.9	492.9	491.9	489.9	486.8	483.8	479.8	475.8	471.3	466.8	456.3
5°	499.4	499.9	495.4	494.9	491.4	486.8	482.3	476.8	471.3	465.3	453.8
6°	505.9	503.4	502.4	498.9	493.9	489.9	484.3	478.3	470.8	463.8	448.3
7°	508.9	508.4	505.9	502.4	497.9	491.4	485.8	477.8	469.8	462.8	444.3
8°	513.9	513.9	510.9	506.4	499.9	493.9	486.8	477.3	469.3	460.3	438.8
9°	517.4	517.4	513.4	509.4	503.4	495.4	487.3	476.8	466.8	456.3	433.8
10°	521.4	520.4	517.4	511.4	506.4	497.4	487.3	476.3	465.3	453.3	428.7
11°	524.4	522.9	519.4	514.9	506.9	497.9	487.3	476.3	463.3	450.3	423.7
12°	526.9	525.9	521.4	515.9	507.9	498.9	486.8	474.3	459.8	446.3	417.2
13°	529.9	526.9	522.4	517.4	508.4	497.9	484.8	471.3	457.3	442.8	411.7
14°	529.4	528.9	524.9	517.9	507.9	496.9	484.3	468.3	453.8	438.8	405.2
15°	529.9	529.4	524.9	518.4	507.4	495.4	482.8	466.3	450.3	434.3	398.7
16°	529.9	529.9	523.9	517.4	506.9	493.9	479.8	464.3	446.8	430.7	393.2
17°	529.9	529.9	524.9	515.9	505.4	492.9	476.8	460.3	442.8	425.7	385.2
18°	530.9	529.4	522.9	515.4	503.4	490.4	474.8	457.3	439.3	420.2	379.7
19°	528.4	527.4	521.9	512.4	501.9	487.3	471.8	453.8	435.8	415.7	373.1
20°	526.9	528.4	520.9	510.9	498.9	484.8	468.8	450.3	430.7	410.7	366.6
21°	527.4	526.9	518.9	508.4	496.9	481.3	465.3	446.3	425.2	404.7	360.6
22.5°	526.4	524.9	516.4	504.9	490.9	476.8	459.3	439.8	417.2	394.2	349.1
23°	524.4	522.9	516.4	503.9	488.9	474.8	456.3	435.8	414.2	390.7	346.1
24°	516.4	515.9	512.9	500.4	486.3	470.8	452.8	429.2	405.2	380.7	338.6
25°	506.9	507.9	506.4	498.4	482.3	466.3	447.3	421.2	396.7	374.2	329.6
26°	497.9	497.9	496.9	493.9	478.3	461.3	439.3	411.7	388.2	364.6	320.1
27°	486.3	488.3	486.3	484.8	474.3	455.8	430.7	405.2	378.7	355.6	312.0
28°	477.3	477.3	476.3	473.8	470.3	449.3	421.7	395.7	369.6	347.6	303.0
29°	461.3	464.3	464.8	465.3	464.8	440.8	413.2	385.2	360.1	336.1	294.5
30°	446.8	449.8	451.8	455.3	455.8	433.3	403.2	376.7	351.1	327.6	287.0
32.5°	407.2	412.7	418.2	424.2	427.2	410.7	378.7	349.6	323.6	302.5	264.0
35°	369.6	371.1	377.2	391.2	394.2	383.7	349.6	322.1	297.5	277.5	242.4
37.5°	327.1	330.1	338.6	354.6	355.6	347.1	323.6	291.5	268.5	250.9	220.4
40°	292.0	293.5	299.5	313.0	317.6	312.0	291.5	262.5	241.4	224.4	199.3
42.5°	256.9	259.0	266.5	277.0	283.5	277.0	259.0	233.9	213.4	200.8	179.3
45°	227.9	230.4	237.4	243.4	245.4	241.4	225.4	204.9	190.3	177.3	160.8
47.5°	202.9	205.4	210.4	212.9	215.4	211.4	198.8	181.8	167.3	156.8	141.7
50°	183.8	183.3	186.8	187.8	187.8	183.3	172.8	158.8	146.8	138.2	125.7
52.5°	162.3	163.3	165.8	164.8	164.3	160.3	151.3	139.2	129.2	121.7	110.2
55°	146.8	145.3	146.8	145.8	143.8	139.7	131.7	121.7	113.2	106.7	96.2
57.5°	129.7	129.7	130.2	128.2	125.7	121.2	114.2	106.2	98.7	93.2	84.6
60°	114.2	115.2	114.7	112.7	110.2	105.2	99.7	91.7	85.1	81.1	73.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	77.6	77.6	76.1	74.6	71.1	66.6	62.6	57.6	54.1	50.6	45.6
70°	66.1	67.1	65.1	62.6	60.1	57.1	52.6	48.6	45.1	42.6	38.6
72.5°	57.1	56.6	55.1	52.6	50.6	47.1	43.1	40.1	37.1	35.1	32.1
75°	47.1	47.1	45.6	43.6	41.1	38.1	35.1	32.6	30.1	28.0	26.5
77.5°	37.6	38.1	36.6	35.1	33.1	30.1	27.5	25.5	23.5	22.0	21.0
80°	29.1	29.6	28.0	27.0	24.5	23.0	21.0	19.0	17.5	16.5	16.0
82.5°	22.0	21.5	20.5	20.0	18.0	16.5	14.5	13.5	12.5	11.5	11.5
85°	14.5	14.0	13.5	13.0	11.5	10.0	9.5	8.5	7.5	7.0	7.0
87.5°	7.5	7.5	7.0	6.5	6.0	5.0	4.5	3.5	3.0	3.0	3.0
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°	467.8	467.8	467.8
1°	465.8	463.8	463.3
2°	459.8	456.8	457.3
3°	454.3	450.8	447.3
4°	447.3	441.8	441.8
5°	441.3	435.8	434.3
6°	435.8	426.7	424.7
7°	430.7	419.7	416.2
8°	422.2	411.2	407.7
9°	416.2	404.2	400.7
10°	408.2	396.2	389.7
11°	401.7	388.2	383.2
12°	394.7	378.2	373.1
13°	386.7	369.6	366.6
14°	379.2	362.6	357.1
15°	371.1	354.1	347.6
16°	362.6	345.6	339.6
17°	355.6	336.6	332.1
18°	348.6	328.6	321.6
19°	340.1	321.1	313.0
20°	332.6	311.5	305.0
21°	324.6	304.5	297.5
22.5°	313.5	291.0	284.5
23°	310.0	287.0	280.0
24°	302.0	279.0	273.0
25°	294.0	273.0	266.5
26°	287.0	264.0	257.9
27°	280.0	256.9	250.4
28°	272.5	249.4	244.4
29°	265.0	241.4	236.4
30°	256.9	235.9	227.4
32.5°	236.9	217.9	210.9
35°	217.4	200.8	194.8
37.5°	198.3	184.8	179.3
40°	181.8	169.8	164.3
42.5°	164.8	153.8	148.3
45°	147.3	138.2	132.7
47.5°	131.2	123.7	117.7
50°	116.7	109.2	106.2
52.5°	102.7	97.7	99.2
55°	89.7	89.7	89.2
57.5°	77.1	80.6	81.1
60°	67.6	72.1	73.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	46.6	49.1	50.1
70°	40.1	42.1	42.6
72.5°	34.1	35.6	36.6
75°	27.5	29.6	29.6
77.5°	22.5	23.5	24.0
80°	17.0	17.5	18.0
82.5°	12.0	12.5	13.0
85°	7.0	7.5	8.0
87.5°	3.0	3.0	3.0
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°	101.2	102.2	100.7	98.2	95.7	91.2	86.1	79.1	74.1	70.1	63.1
65°	88.7	89.2	88.2	85.6	83.1	78.6	73.6	67.6	63.6	59.6	53.6

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62.5°	60.6	64.1	64.6
65°	53.1	56.1	56.6

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Scaled Data Report



(END OF REPORT)