

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: P838366

Luminaire Tested: HCSQ610D010-HM60525935-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838366
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-HM60525935-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

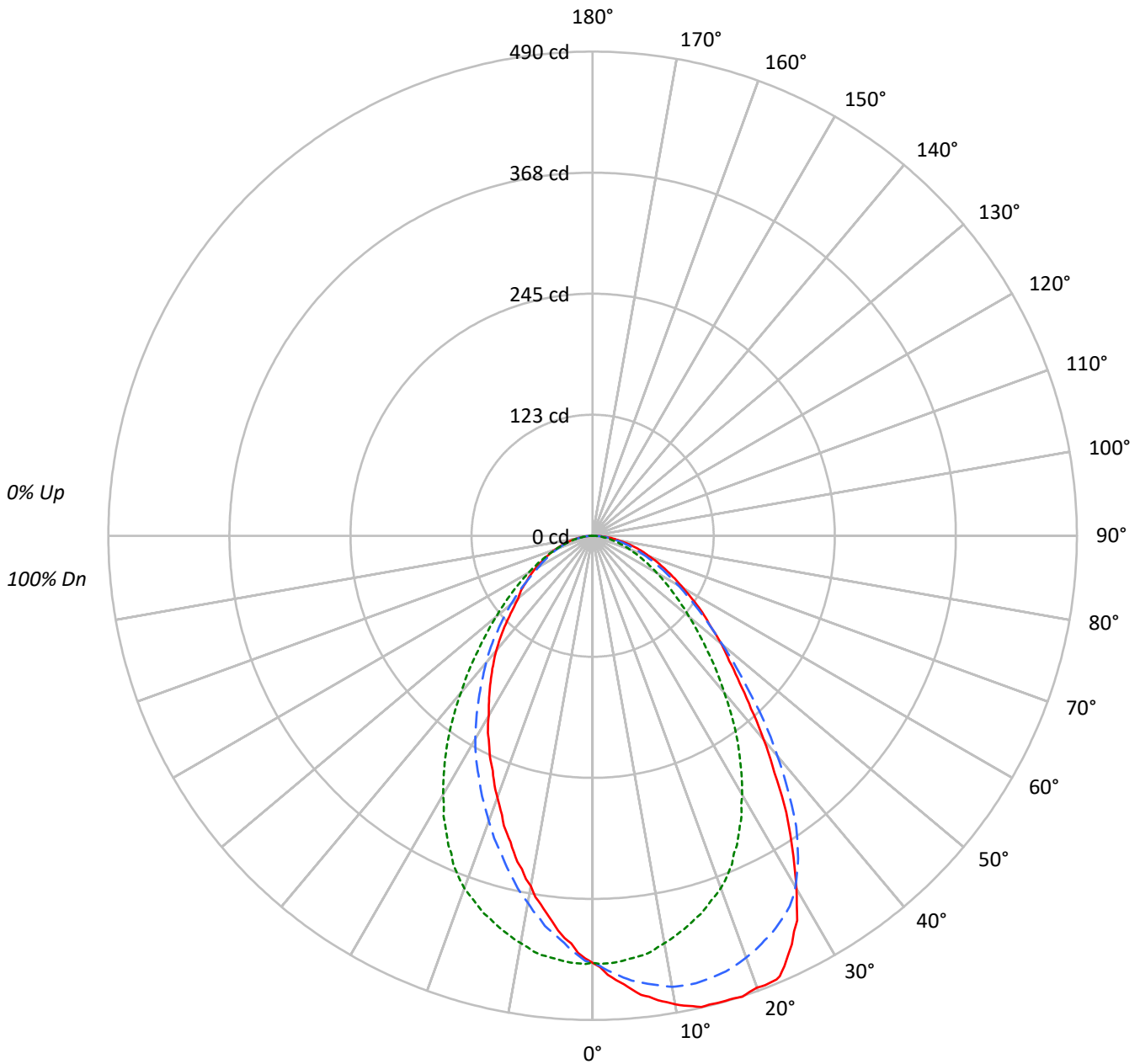
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 817.1 lumens
Efficiency: N/A
Efficacy: 82.5 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					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°	41860	41860	41860	41860	41860
5°	44850	43931	41796	39637	39005
10°	47375	45599	41187	37085	35403
15°	49093	46446	40227	34380	32204
20°	50175	46835	39113	31670	29041
25°	50046	46829	36941	29031	26306
30°	46165	45931	33849	26545	23491
35°	40375	42486	30311	23747	21287
40°	34107	36769	26216	21233	19184
45°	28839	30805	22441	18632	16797
50°	25591	25832	19246	16247	14785
55°	22902	22117	16636	13985	13900
60°	20441	19278	14512	12109	13078
65°	18774	17123	12630	11232	11989
70°	17306	15324	11132	10480	11132
75°	16282	13681	9694	9507	10218
80°	14951	12273	8536	8759	9317
85°	14894	11060	7225	7225	8225

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 31058 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.8	5.0
10°-20°	113.6	13.9
20°-30°	162.0	19.8
30°-40°	167.0	20.4
40°-50°	134.4	16.5
50°-60°	95.1	11.6
60°-70°	61.6	7.5
70°-80°	33.1	4.0
80°-90°	9.6	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°	316.4	38.7
0°-40°	483.4	59.2
0°-60°	712.8	87.2
0°-90°	817.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	817.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	432	432	432	432	432	
5°	461	452	430	408	401	45
15°	490	463	401	343	321	138
25°	468	438	346	272	246	213
35°	341	359	256	201	180	212
45°	210	225	164	136	123	164
55°	136	131	98	83	82	121
65°	82	75	55	49	52	82
75°	44	37	26	25	27	46
85°	13	10	6	6	7	15
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°	432.1	432.1	432.1	432.1	432.1	432.1	432.1	432.1	432.1	432.1	432.1
1°	436.7	438.6	437.2	437.2	435.8	435.3	436.3	434.9	434.4	433.5	431.6
2°	444.6	443.2	442.7	443.2	440.4	440.4	439.0	436.3	434.9	433.0	427.9
3°	450.1	449.2	448.3	447.8	445.1	442.7	440.9	437.7	434.9	432.6	425.2
4°	455.2	455.2	454.3	452.5	449.7	446.9	443.2	439.5	435.3	431.2	421.5
5°	461.2	461.7	457.5	457.1	453.8	449.7	445.5	440.4	435.3	429.8	419.1
6°	467.3	465.0	464.0	460.8	456.2	452.5	447.4	441.8	434.9	428.4	414.1
7°	470.0	469.6	467.3	464.0	459.9	453.8	448.8	441.4	434.0	427.5	410.4
8°	474.7	474.7	471.9	467.7	461.7	456.2	449.7	440.9	433.5	425.2	405.3
9°	477.9	477.9	474.2	470.5	465.0	457.5	450.1	440.4	431.2	421.5	400.6
10°	481.6	480.7	477.9	472.4	467.7	459.4	450.1	440.0	429.8	418.7	396.0
11°	484.4	483.0	479.8	475.6	468.2	459.9	450.1	440.0	427.9	415.9	391.4
12°	486.7	485.8	481.6	476.5	469.1	460.8	449.7	438.1	424.7	412.2	385.4
13°	489.5	486.7	482.5	477.9	469.6	459.9	447.8	435.3	422.4	409.0	380.3
14°	489.0	488.5	484.8	478.4	469.1	458.9	447.4	432.6	419.1	405.3	374.3
15°	489.5	489.0	484.8	478.8	468.7	457.5	446.0	430.7	415.9	401.1	368.3
16°	489.5	489.5	483.9	477.9	468.2	456.2	443.2	428.9	412.7	397.9	363.2
17°	489.5	489.5	484.8	476.5	466.8	455.2	440.4	425.2	409.0	393.2	355.8
18°	490.4	489.0	483.0	476.1	465.0	452.9	438.6	422.4	405.7	388.2	350.7
19°	488.1	487.2	482.1	473.3	463.6	450.1	435.8	419.1	402.5	384.0	344.7
20°	486.7	488.1	481.1	471.9	460.8	447.8	433.0	415.9	397.9	379.4	338.7
21°	487.2	486.7	479.3	469.6	458.9	444.6	429.8	412.2	392.8	373.8	333.1
22.5°	486.2	484.8	477.0	466.3	453.4	440.4	424.2	406.2	385.4	364.1	322.5
23°	484.4	483.0	477.0	465.4	451.5	438.6	421.5	402.5	382.6	360.9	319.7
24°	477.0	476.5	473.7	462.2	449.2	434.9	418.2	396.5	374.3	351.6	312.7
25°	468.2	469.1	467.7	460.3	445.5	430.7	413.1	389.1	366.4	345.6	304.4
26°	459.9	459.9	458.9	456.2	441.8	426.1	405.7	380.3	358.5	336.8	295.6
27°	449.2	451.1	449.2	447.8	438.1	421.0	397.9	374.3	349.8	328.5	288.2
28°	440.9	440.9	440.0	437.7	434.4	415.0	389.5	365.5	341.4	321.1	279.9
29°	426.1	428.9	429.3	429.8	429.3	407.1	381.7	355.8	332.6	310.4	272.0
30°	412.7	415.4	417.3	420.5	421.0	400.2	372.4	347.9	324.3	302.6	265.1
32.5°	376.1	381.2	386.3	391.9	394.6	379.4	349.8	322.9	298.9	279.4	243.8
35°	341.4	342.8	348.4	361.3	364.1	354.4	322.9	297.5	274.8	256.3	223.9
37.5°	302.1	304.9	312.7	327.5	328.5	320.6	298.9	269.3	248.0	231.8	203.6
40°	269.7	271.1	276.7	289.1	293.3	288.2	269.3	242.4	223.0	207.3	184.1
42.5°	237.3	239.2	246.1	255.8	261.9	255.8	239.2	216.1	197.1	185.5	165.6
45°	210.5	212.8	219.3	224.8	226.7	223.0	208.2	189.2	175.8	163.8	148.5
47.5°	187.4	189.7	194.3	196.6	198.9	195.2	183.7	167.9	154.5	144.8	130.9
50°	169.8	169.3	172.6	173.5	173.5	169.3	159.6	146.7	135.6	127.7	116.1
52.5°	149.9	150.8	153.1	152.2	151.7	148.0	139.7	128.6	119.4	112.4	101.8
55°	135.6	134.2	135.6	134.6	132.8	129.1	121.7	112.4	104.6	98.5	88.8
57.5°	119.8	119.8	120.3	118.4	116.1	112.0	105.5	98.1	91.1	86.1	78.2
60°	105.5	106.4	105.9	104.1	101.8	97.2	92.1	84.7	78.6	74.9	67.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	71.7	71.7	70.3	68.9	65.7	61.5	57.8	53.2	50.0	46.7	42.1
70°	61.1	62.0	60.1	57.8	55.5	52.7	48.6	44.9	41.6	39.3	35.6
72.5°	52.7	52.3	50.9	48.6	46.7	43.5	39.8	37.0	34.2	32.4	29.6
75°	43.5	43.5	42.1	40.2	37.9	35.2	32.4	30.1	27.8	25.9	24.5
77.5°	34.7	35.2	33.8	32.4	30.5	27.8	25.4	23.6	21.7	20.4	19.4
80°	26.8	27.3	25.9	25.0	22.7	21.3	19.4	17.6	16.2	15.3	14.8
82.5°	20.4	19.9	19.0	18.5	16.7	15.3	13.4	12.5	11.6	10.6	10.6
85°	13.4	13.0	12.5	12.0	10.6	9.3	8.8	7.9	6.9	6.5	6.5
87.5°	6.9	6.9	6.5	6.0	5.6	4.6	4.2	3.2	2.8	2.8	2.8
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°	432.1	432.1	432.1
1°	430.3	428.4	427.9
2°	424.7	421.9	422.4
3°	419.6	416.4	413.1
4°	413.1	408.0	408.0
5°	407.6	402.5	401.1
6°	402.5	394.2	392.3
7°	397.9	387.7	384.5
8°	390.0	379.8	376.6
9°	384.5	373.3	370.1
10°	377.0	365.9	359.9
11°	371.0	358.5	353.9
12°	364.6	349.3	344.7
13°	357.2	341.4	338.7
14°	350.2	334.9	329.9
15°	342.8	327.1	321.1
16°	334.9	319.2	313.7
17°	328.5	310.9	306.7
18°	322.0	303.5	297.0
19°	314.1	296.6	289.1
20°	307.2	287.8	281.7
21°	299.8	281.3	274.8
22.5°	289.6	268.8	262.8
23°	286.4	265.1	258.6
24°	279.0	257.7	252.1
25°	271.6	252.1	246.1
26°	265.1	243.8	238.3
27°	258.6	237.3	231.3
28°	251.7	230.4	225.8
29°	244.7	223.0	218.4
30°	237.3	217.9	210.0
32.5°	218.8	201.2	194.8
35°	200.8	185.5	180.0
37.5°	183.2	170.7	165.6
40°	167.9	156.8	151.7
42.5°	152.2	142.0	136.9
45°	136.0	127.7	122.6
47.5°	121.2	114.3	108.7
50°	107.8	100.9	98.1
52.5°	94.8	90.2	91.6
55°	82.8	82.8	82.3
57.5°	71.2	74.5	74.9
60°	62.5	66.6	67.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	43.0	45.3	46.3
70°	37.0	38.9	39.3
72.5°	31.5	32.8	33.8
75°	25.4	27.3	27.3
77.5°	20.8	21.7	22.2
80°	15.7	16.2	16.7
82.5°	11.1	11.6	12.0
85°	6.5	6.9	7.4
87.5°	2.8	2.8	2.8
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°	93.5	94.4	93.0	90.7	88.4	84.2	79.6	73.1	68.5	64.8	58.3
65°	81.9	82.3	81.4	79.1	76.8	72.6	68.0	62.5	58.8	55.1	49.5

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62.5°	56.0	59.2	59.7
65°	49.0	51.8	52.3

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(END OF REPORT)