

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: P838336

Luminaire Tested: HCSQ610D010-HM60525827-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838336
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-HM60525827-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

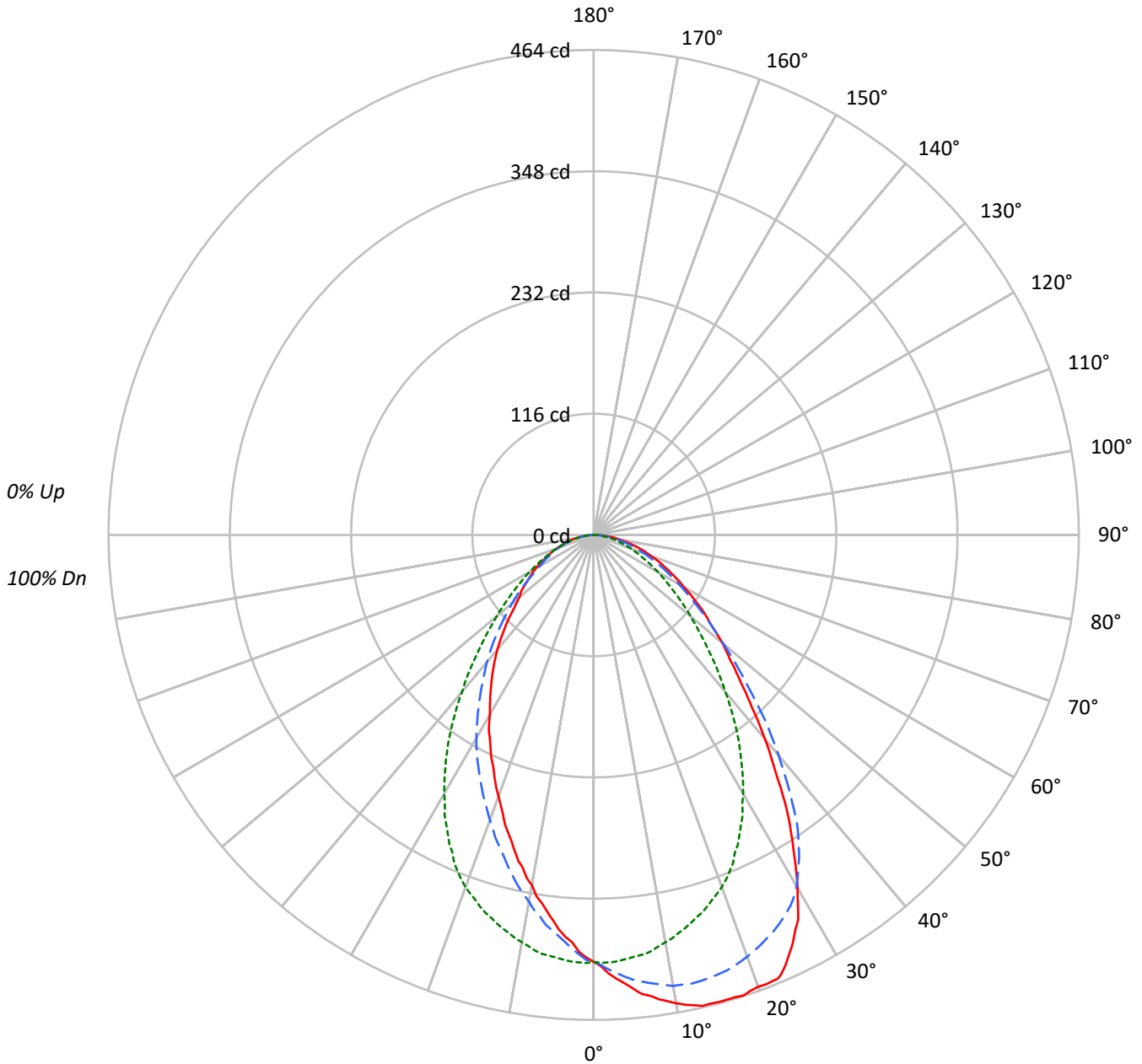
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 772.3 lumens
Efficiency: N/A
Efficacy: 78.0 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°	39564	39564	39564	39564	39564
5°	42399	41524	39501	37459	36866
10°	44778	43101	38925	35059	33465
15°	46395	43898	38021	32495	30439
20°	47423	44268	36969	29928	27454
25°	47299	44263	34910	27439	24863
30°	43626	43408	31993	25091	22205
35°	38163	40150	28643	22446	20117
40°	32235	34752	24774	20070	18135
45°	27264	29120	21208	17619	15879
50°	24189	24415	18191	15357	13971
55°	21636	20901	15724	13225	13140
60°	19317	18213	13718	11431	12361
65°	17742	16195	11920	10613	11324
70°	16343	14488	10537	9914	10537
75°	15384	12932	9170	8983	9657
80°	14170	11576	8034	8312	8759
85°	14116	10448	6780	6780	7781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 29360 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.5	5.0
10°-20°	107.4	13.9
20°-30°	153.1	19.8
30°-40°	157.8	20.4
40°-50°	127.1	16.5
50°-60°	89.8	11.6
60°-70°	58.2	7.5
70°-80°	31.3	4.0
80°-90°	9.0	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°	299.0	38.7
0°-40°	456.9	59.2
0°-60°	673.8	87.2
0°-90°	772.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	772.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	408	408	408	408	408	
5°	436	427	406	385	379	42
15°	463	438	379	324	304	131
25°	442	414	327	257	233	201
35°	323	340	242	190	170	200
45°	199	213	155	129	116	155
55°	128	124	93	78	78	115
65°	77	71	52	46	49	77
75°	41	35	24	24	26	44
85°	13	9	6	6	7	14
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°	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4
1°	412.8	414.5	413.2	413.2	411.9	411.5	412.3	411.0	410.6	409.7	408.0
2°	420.2	418.9	418.5	418.9	416.3	416.3	415.0	412.3	411.0	409.3	404.5
3°	425.5	424.6	423.7	423.3	420.6	418.5	416.7	413.7	411.0	408.8	401.8
4°	430.3	430.3	429.4	427.6	425.0	422.4	418.9	415.4	411.5	407.5	398.3
5°	436.0	436.4	432.5	432.0	429.0	425.0	421.1	416.3	411.5	406.2	396.2
6°	441.6	439.4	438.6	435.5	431.1	427.6	422.8	417.6	411.0	404.9	391.4
7°	444.3	443.8	441.6	438.6	434.6	429.0	424.1	417.1	410.2	404.0	387.9
8°	448.6	448.6	446.0	442.1	436.4	431.1	425.0	416.7	409.7	401.8	383.0
9°	451.7	451.7	448.2	444.7	439.4	432.5	425.5	416.3	407.5	398.3	378.7
10°	455.2	454.3	451.7	446.4	442.1	434.2	425.5	415.8	406.2	395.7	374.3
11°	457.8	456.5	453.4	449.5	442.5	434.6	425.5	415.8	404.5	393.1	369.9
12°	460.0	459.1	455.2	450.4	443.4	435.5	425.0	414.1	401.4	389.6	364.2
13°	462.6	460.0	456.1	451.7	443.8	434.6	423.3	411.5	399.2	386.5	359.4
14°	462.2	461.8	458.3	452.1	443.4	433.8	422.8	408.8	396.2	383.0	353.7
15°	462.6	462.2	458.3	452.6	442.9	432.5	421.5	407.1	393.1	379.1	348.1
16°	462.6	462.6	457.4	451.7	442.5	431.1	418.9	405.3	390.0	376.0	343.3
17°	462.6	462.6	458.3	450.4	441.2	430.3	416.3	401.8	386.5	371.7	336.3
18°	463.5	462.2	456.5	449.9	439.4	428.1	414.5	399.2	383.5	366.9	331.4
19°	461.3	460.4	455.6	447.3	438.1	425.5	411.9	396.2	380.4	362.9	325.8
20°	460.0	461.3	454.8	446.0	435.5	423.3	409.3	393.1	376.0	358.6	320.1
21°	460.4	460.0	453.0	443.8	433.8	420.2	406.2	389.6	371.2	353.3	314.8
22.5°	459.6	458.3	450.8	440.8	428.5	416.3	401.0	383.9	364.2	344.1	304.8
23°	457.8	456.5	450.8	439.9	426.8	414.5	398.3	380.4	361.6	341.1	302.1
24°	450.8	450.4	447.8	436.8	424.6	411.0	395.3	374.7	353.7	332.3	295.6
25°	442.5	443.4	442.1	435.1	421.1	407.1	390.5	367.7	346.3	326.6	287.7
26°	434.6	434.6	433.8	431.1	417.6	402.7	383.5	359.4	338.9	318.3	279.4
27°	424.6	426.3	424.6	423.3	414.1	397.9	376.0	353.7	330.6	310.5	272.4
28°	416.7	416.7	415.8	413.7	410.6	392.2	368.2	345.4	322.7	303.5	264.5
29°	402.7	405.3	405.8	406.2	405.8	384.8	360.7	336.3	314.4	293.4	257.1
30°	390.0	392.7	394.4	397.5	397.9	378.2	352.0	328.8	306.5	286.0	250.6
32.5°	355.5	360.3	365.1	370.4	373.0	358.6	330.6	305.2	282.5	264.1	230.4
35°	322.7	324.0	329.3	341.5	344.1	334.9	305.2	281.2	259.7	242.2	211.6
37.5°	285.5	288.2	295.6	309.6	310.5	303.0	282.5	254.5	234.4	219.1	192.4
40°	254.9	256.2	261.5	273.3	277.2	272.4	254.5	229.1	210.8	195.9	174.0
42.5°	224.3	226.1	232.6	241.8	247.5	241.8	226.1	204.2	186.3	175.3	156.5
45°	199.0	201.1	207.3	212.5	214.3	210.8	196.8	178.8	166.2	154.8	140.4
47.5°	177.1	179.3	183.7	185.8	188.0	184.5	173.6	158.7	146.0	136.9	123.7
50°	160.5	160.0	163.1	164.0	164.0	160.0	150.9	138.6	128.1	120.7	109.8
52.5°	141.7	142.5	144.7	143.9	143.4	139.9	132.1	121.6	112.8	106.3	96.2
55°	128.1	126.8	128.1	127.2	125.5	122.0	115.0	106.3	98.8	93.1	84.0
57.5°	113.3	113.3	113.7	111.9	109.8	105.8	99.7	92.7	86.1	81.3	73.9
60°	99.7	100.6	100.1	98.4	96.2	91.8	87.0	80.0	74.3	70.8	63.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	67.8	67.8	66.5	65.2	62.1	58.2	54.7	50.3	47.2	44.2	39.8
70°	57.7	58.6	56.8	54.7	52.5	49.8	45.9	42.4	39.4	37.2	33.7
72.5°	49.8	49.4	48.1	45.9	44.2	41.1	37.6	35.0	32.4	30.6	28.0
75°	41.1	41.1	39.8	38.0	35.9	33.2	30.6	28.4	26.2	24.5	23.2
77.5°	32.8	33.2	31.9	30.6	28.9	26.2	24.0	22.3	20.6	19.2	18.4
80°	25.4	25.8	24.5	23.6	21.4	20.1	18.4	16.6	15.3	14.4	14.0
82.5°	19.2	18.8	17.9	17.5	15.7	14.4	12.7	11.8	10.9	10.1	10.1
85°	12.7	12.2	11.8	11.4	10.1	8.7	8.3	7.4	6.6	6.1	6.1
87.5°	6.6	6.6	6.1	5.7	5.2	4.4	3.9	3.1	2.6	2.6	2.6
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°	408.4	408.4	408.4
1°	406.7	404.9	404.5
2°	401.4	398.8	399.2
3°	396.6	393.5	390.5
4°	390.5	385.7	385.7
5°	385.2	380.4	379.1
6°	380.4	372.5	370.8
7°	376.0	366.4	363.4
8°	368.6	359.0	355.9
9°	363.4	352.9	349.8
10°	356.4	345.9	340.2
11°	350.7	338.9	334.5
12°	344.6	330.1	325.8
13°	337.6	322.7	320.1
14°	331.0	316.6	311.8
15°	324.0	309.1	303.5
16°	316.6	301.7	296.5
17°	310.5	293.8	289.9
18°	304.3	286.8	280.7
19°	296.9	280.3	273.3
20°	290.3	272.0	266.3
21°	283.3	265.9	259.7
22.5°	273.7	254.0	248.4
23°	270.7	250.6	244.4
24°	263.7	243.6	238.3
25°	256.7	238.3	232.6
26°	250.6	230.4	225.2
27°	244.4	224.3	218.6
28°	237.9	217.8	213.4
29°	231.3	210.8	206.4
30°	224.3	206.0	198.5
32.5°	206.8	190.2	184.1
35°	189.8	175.3	170.1
37.5°	173.2	161.4	156.5
40°	158.7	148.2	143.4
42.5°	143.9	134.2	129.4
45°	128.6	120.7	115.9
47.5°	114.6	108.0	102.8
50°	101.9	95.3	92.7
52.5°	89.6	85.3	86.6
55°	78.3	78.3	77.8
57.5°	67.3	70.4	70.8
60°	59.0	63.0	63.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	40.7	42.9	43.7
70°	35.0	36.7	37.2
72.5°	29.7	31.0	31.9
75°	24.0	25.8	25.8
77.5°	19.7	20.6	21.0
80°	14.9	15.3	15.7
82.5°	10.5	10.9	11.4
85°	6.1	6.6	7.0
87.5°	2.6	2.6	2.6
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°	88.3	89.2	87.9	85.7	83.5	79.6	75.2	69.1	64.7	61.2	55.1
65°	77.4	77.8	77.0	74.8	72.6	68.7	64.3	59.0	55.5	52.0	46.8

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62.5°	52.9	56.0	56.4
65°	46.3	49.0	49.4

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(END OF REPORT)