

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: P838361

Luminaire Tested: HCSQ610D010-HM60525930-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838361
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-HM60525930-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

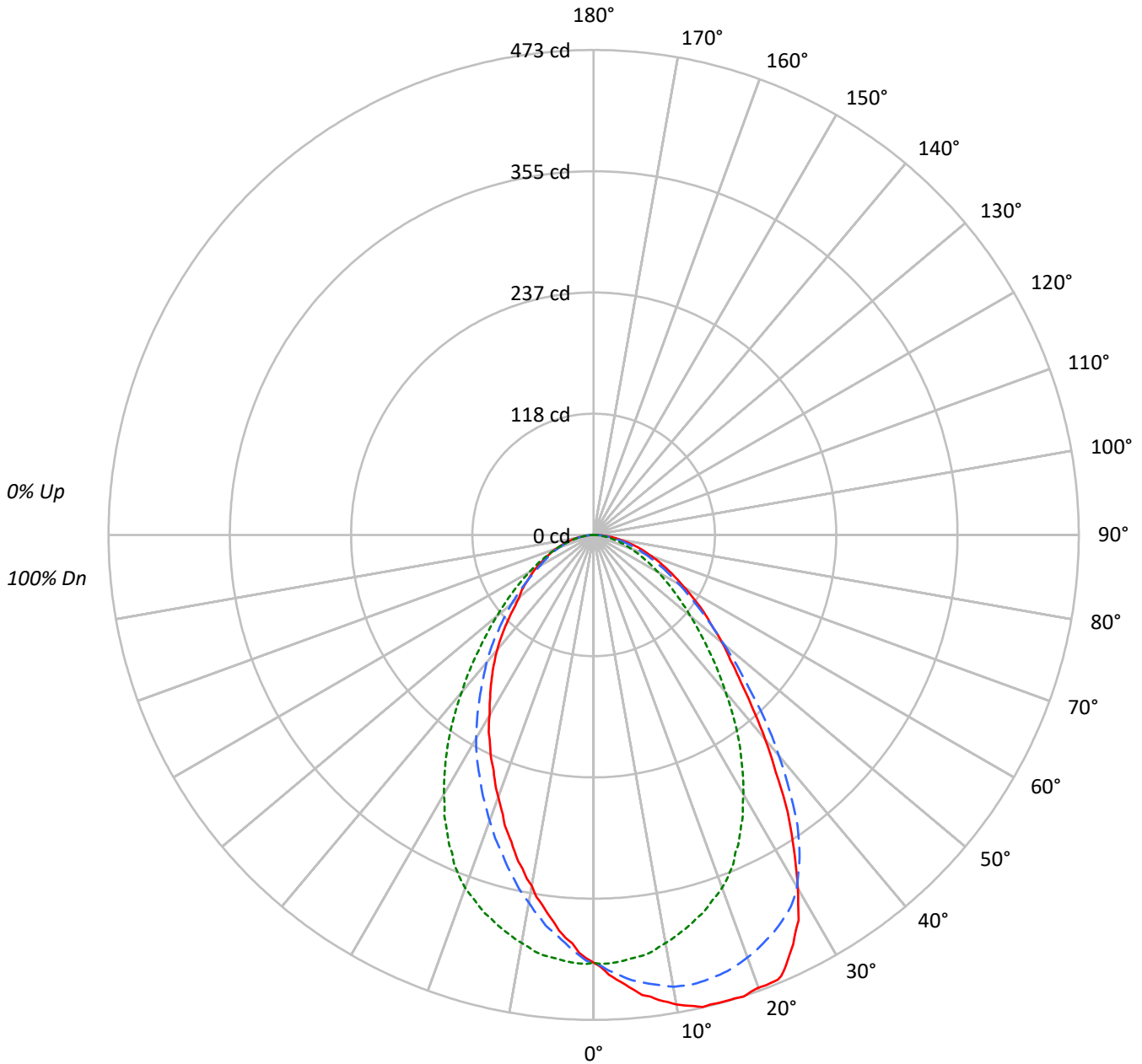
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 788.9 lumens
Efficiency: N/A
Efficacy: 79.7 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°	40416	40416	40416	40416	40416
5°	43303	42414	40347	38266	37653
10°	45742	44025	39761	35807	34184
15°	47398	44841	38833	33197	31091
20°	48443	45222	37763	30577	28041
25°	48314	45209	35659	28027	25397
30°	44566	44342	32675	25628	22686
35°	38980	41014	29258	22919	20542
40°	32931	35504	25305	20499	18527
45°	27839	29743	21660	17988	16221
50°	24702	24943	18583	15689	14272
55°	22109	21349	16062	13512	13427
60°	19724	18610	14028	11683	12633
65°	18132	16527	12195	10842	11576
70°	16711	14800	10763	10112	10763
75°	15721	13194	9357	9208	9881
80°	14449	11827	8201	8480	8982
85°	14450	10671	7003	7003	7892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 29990 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.3	5.0
10°-20°	109.7	13.9
20°-30°	156.4	19.8
30°-40°	161.2	20.4
40°-50°	129.8	16.5
50°-60°	91.8	11.6
60°-70°	59.5	7.5
70°-80°	32.0	4.1
80°-90°	9.2	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°	305.4	38.7
0°-40°	466.7	59.2
0°-60°	688.2	87.2
0°-90°	788.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	788.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	417	417	417	417	417	
5°	445	436	415	394	387	43
15°	473	447	387	331	310	134
25°	452	423	334	262	238	206
35°	330	347	247	194	174	205
45°	203	217	158	131	118	159
55°	131	126	95	80	80	117
65°	79	72	53	47	50	79
75°	42	35	25	25	26	45
85°	13	10	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°	417.2	417.2	417.2	417.2	417.2	417.2	417.2	417.2	417.2	417.2	417.2
1°	421.6	423.4	422.1	422.1	420.7	420.3	421.2	419.8	419.4	418.5	416.7
2°	429.2	427.9	427.4	427.9	425.2	425.2	423.9	421.2	419.8	418.1	413.1
3°	434.6	433.7	432.8	432.4	429.7	427.4	425.7	422.5	419.8	417.6	410.5
4°	439.5	439.5	438.6	436.8	434.1	431.5	427.9	424.3	420.3	416.3	406.9
5°	445.3	445.8	441.7	441.3	438.2	434.1	430.1	425.2	420.3	414.9	404.7
6°	451.1	448.9	448.0	444.9	440.4	436.8	431.9	426.5	419.8	413.6	399.8
7°	453.8	453.3	451.1	448.0	444.0	438.2	433.2	426.1	419.0	412.7	396.2
8°	458.3	458.3	455.6	451.6	445.8	440.4	434.1	425.7	418.5	410.5	391.3
9°	461.4	461.4	457.8	454.2	448.9	441.7	434.6	425.2	416.3	406.9	386.8
10°	465.0	464.1	461.4	456.0	451.6	443.5	434.6	424.8	414.9	404.2	382.3
11°	467.6	466.3	463.2	459.2	452.0	444.0	434.6	424.8	413.1	401.5	377.9
12°	469.9	469.0	465.0	460.0	452.9	444.9	434.1	423.0	410.0	398.0	372.1
13°	472.6	469.9	465.9	461.4	453.3	444.0	432.4	420.3	407.8	394.8	367.1
14°	472.1	471.7	468.1	461.8	452.9	443.1	431.9	417.6	404.7	391.3	361.3
15°	472.6	472.1	468.1	462.3	452.5	441.7	430.6	415.8	401.5	387.2	355.5
16°	472.6	472.6	467.2	461.4	452.0	440.4	427.9	414.0	398.4	384.1	350.6
17°	472.6	472.6	468.1	460.0	450.7	439.5	425.2	410.5	394.8	379.7	343.5
18°	473.4	472.1	466.3	459.6	448.9	437.3	423.4	407.8	391.7	374.7	338.6
19°	471.2	470.3	465.4	456.9	447.5	434.6	420.7	404.7	388.6	370.7	332.8
20°	469.9	471.2	464.5	455.6	444.9	432.4	418.1	401.5	384.1	366.3	326.9
21°	470.3	469.9	462.7	453.3	443.1	429.2	414.9	398.0	379.2	360.9	321.6
22.5°	469.4	468.1	460.5	450.2	437.7	425.2	409.6	392.2	372.1	351.5	311.3
23°	467.6	466.3	460.5	449.3	435.9	423.4	406.9	388.6	369.4	348.4	308.6
24°	460.5	460.0	457.4	446.2	433.7	419.8	403.8	382.8	361.3	339.5	301.9
25°	452.0	452.9	451.6	444.4	430.1	415.8	398.9	375.6	353.7	333.6	293.9
26°	444.0	444.0	443.1	440.4	426.5	411.4	391.7	367.1	346.2	325.2	285.4
27°	433.7	435.5	433.7	432.4	423.0	406.4	384.1	361.3	337.7	317.1	278.3
28°	425.7	425.7	424.8	422.5	419.4	400.6	376.1	352.9	329.6	310.0	270.2
29°	411.4	414.0	414.5	414.9	414.5	393.1	368.5	343.5	321.1	299.7	262.6
30°	398.4	401.1	402.9	406.0	406.4	386.4	359.6	335.9	313.1	292.1	255.9
32.5°	363.1	368.0	373.0	378.3	381.0	366.3	337.7	311.8	288.5	269.8	235.4
35°	329.6	331.0	336.3	348.8	351.5	342.1	311.8	287.2	265.3	247.4	216.2
37.5°	291.7	294.3	301.9	316.2	317.1	309.5	288.5	259.9	239.4	223.8	196.5
40°	260.4	261.7	267.1	279.2	283.2	278.3	259.9	234.0	215.3	200.1	177.8
42.5°	229.1	230.9	237.6	247.0	252.8	247.0	230.9	208.6	190.3	179.1	159.9
45°	203.2	205.5	211.7	217.1	218.9	215.3	201.0	182.7	169.7	158.1	143.4
47.5°	180.9	183.1	187.6	189.8	192.1	188.5	177.3	162.1	149.2	139.8	126.4
50°	163.9	163.5	166.6	167.5	167.5	163.5	154.1	141.6	130.9	123.3	112.1
52.5°	144.7	145.6	147.8	146.9	146.5	142.9	134.9	124.2	115.2	108.5	98.3
55°	130.9	129.5	130.9	130.0	128.2	124.6	117.5	108.5	100.9	95.1	85.8
57.5°	115.7	115.7	116.1	114.3	112.1	108.1	101.8	94.7	88.0	83.1	75.5
60°	101.8	102.7	102.3	100.5	98.3	93.8	88.9	81.7	75.9	72.4	65.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	69.2	69.2	67.9	66.6	63.4	59.4	55.8	51.4	48.2	45.1	40.6
70°	59.0	59.9	58.1	55.8	53.6	50.9	46.9	43.3	40.2	38.0	34.4
72.5°	50.9	50.5	49.1	46.9	45.1	42.0	38.4	35.7	33.1	31.3	28.6
75°	42.0	42.0	40.6	38.9	36.6	33.9	31.3	29.0	26.8	25.0	23.7
77.5°	33.5	33.9	32.6	31.3	29.5	26.8	24.6	22.8	21.0	19.7	18.8
80°	25.9	26.4	25.0	24.1	21.9	20.5	18.8	17.0	15.6	14.7	14.3
82.5°	19.7	19.2	18.3	17.9	16.1	14.7	13.0	12.1	11.2	10.3	10.3
85°	13.0	12.5	12.1	11.6	10.3	8.9	8.5	7.6	6.7	6.3	6.3
87.5°	6.7	6.7	6.3	5.8	5.4	4.5	4.0	3.1	2.7	2.7	2.7
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°	417.2	417.2	417.2
1°	415.4	413.6	413.1
2°	410.0	407.3	407.8
3°	405.1	402.0	398.9
4°	398.9	393.9	393.9
5°	393.5	388.6	387.2
6°	388.6	380.5	378.8
7°	384.1	374.3	371.2
8°	376.5	366.7	363.6
9°	371.2	360.4	357.3
10°	364.0	353.3	347.5
11°	358.2	346.2	341.7
12°	352.0	337.2	332.8
13°	344.8	329.6	326.9
14°	338.1	323.4	318.5
15°	331.0	315.8	310.0
16°	323.4	308.2	302.8
17°	317.1	300.1	296.1
18°	310.9	293.0	286.7
19°	303.3	286.3	279.2
20°	296.6	277.8	272.0
21°	289.4	271.6	265.3
22.5°	279.6	259.5	253.7
23°	276.5	255.9	249.7
24°	269.3	248.8	243.4
25°	262.2	243.4	237.6
26°	255.9	235.4	230.0
27°	249.7	229.1	223.3
28°	243.0	222.4	218.0
29°	236.3	215.3	210.8
30°	229.1	210.4	202.8
32.5°	211.3	194.3	188.0
35°	193.8	179.1	173.7
37.5°	176.9	164.8	159.9
40°	162.1	151.4	146.5
42.5°	146.9	137.1	132.2
45°	131.3	123.3	118.4
47.5°	117.0	110.3	105.0
50°	104.1	97.4	94.7
52.5°	91.6	87.1	88.4
55°	80.0	80.0	79.5
57.5°	68.8	71.9	72.4
60°	60.3	64.3	65.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	41.5	43.8	44.7
70°	35.7	37.5	38.0
72.5°	30.4	31.7	32.6
75°	24.6	26.4	26.4
77.5°	20.1	21.0	21.4
80°	15.2	15.6	16.1
82.5°	10.7	11.2	11.6
85°	6.3	6.7	7.1
87.5°	2.7	2.7	2.7
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°	90.2	91.1	89.8	87.5	85.3	81.3	76.8	70.6	66.1	62.5	56.3
65°	79.1	79.5	78.6	76.4	74.1	70.1	65.7	60.3	56.7	53.2	47.8

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62.5°	54.0	57.2	57.6
65°	47.3	50.0	50.5

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(END OF REPORT)