

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: P838416

Luminaire Tested: HCSQ620D010-HM60525827-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838416
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-HM60525827-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

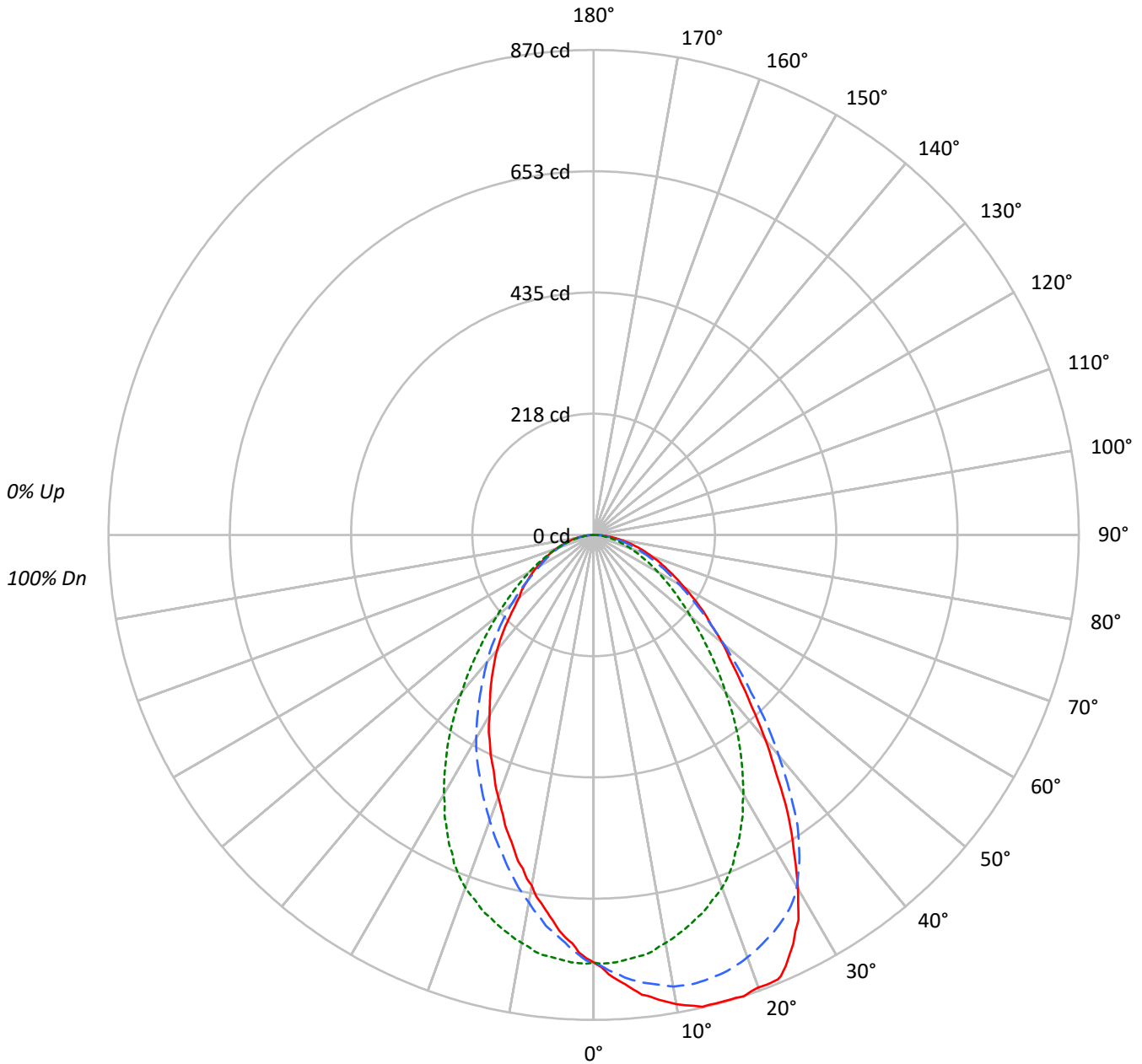
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1450.3 lumens
Efficiency: N/A
Efficacy: 72.5 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): 20
Input Voltage (V): NR
Input Current (Ain): 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	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°	74294	74294	74294	74294	74294
5°	79615	77971	74179	70347	69229
10°	84087	80939	73099	65829	62839
15°	87134	82436	71398	61028	57157
20°	89051	83129	69412	56206	51557
25°	88826	83118	65566	51521	46690
30°	81928	81520	60070	47116	41702
35°	71667	75405	53798	42149	37773
40°	60537	65267	46525	37698	34056
45°	51184	54678	39827	33072	29812
50°	45424	45846	34151	28831	26239
55°	40637	39252	29540	24828	24693
60°	36270	34197	25769	21487	23231
65°	33307	30395	22395	19943	21272
70°	30704	27206	19770	18609	19770
75°	28896	24273	17218	16918	18116
80°	26555	21757	15119	15565	16513
85°	26454	19618	12782	12782	14561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 55130 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	5.0
10°-20°	201.6	13.9
20°-30°	287.6	19.8
30°-40°	296.4	20.4
40°-50°	238.6	16.5
50°-60°	168.7	11.6
60°-70°	109.3	7.5
70°-80°	58.7	4.1
80°-90°	17.0	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°	561.5	38.7
0°-40°	857.9	59.2
0°-60°	1265.2	87.2
0°-90°	1450.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1450.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	767	767	767	767	767	
5°	819	802	763	723	712	79
15°	869	822	712	608	570	246
25°	831	778	613	482	437	378
35°	606	638	455	356	319	376
45°	374	399	291	241	218	292
55°	241	232	175	147	146	215
65°	145	133	98	87	93	145
75°	77	65	46	45	48	82
85°	24	18	12	12	13	26
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°	766.9	766.9	766.9	766.9	766.9	766.9	766.9	766.9	766.9	766.9	766.9
1°	775.1	778.4	776.0	776.0	773.5	772.7	774.3	771.9	771.0	769.4	766.1
2°	789.1	786.6	785.8	786.6	781.7	781.7	779.3	774.3	771.9	768.6	759.5
3°	799.0	797.3	795.7	794.9	789.9	785.8	782.5	776.8	771.9	767.8	754.6
4°	808.0	808.0	806.3	803.1	798.1	793.2	786.6	780.1	772.7	765.3	748.0
5°	818.7	819.5	812.1	811.3	805.5	798.1	790.7	781.7	772.7	762.8	743.9
6°	829.3	825.2	823.6	817.8	809.6	803.1	794.0	784.2	771.9	760.4	734.9
7°	834.3	833.4	829.3	823.6	816.2	805.5	796.5	783.4	770.2	758.7	728.3
8°	842.5	842.5	837.6	830.2	819.5	809.6	798.1	782.5	769.4	754.6	719.3
9°	848.2	848.2	841.7	835.1	825.2	812.1	799.0	781.7	765.3	748.0	711.1
10°	854.8	853.2	848.2	838.4	830.2	815.4	799.0	780.9	762.8	743.1	702.9
11°	859.7	857.3	851.5	844.1	831.0	816.2	799.0	780.9	759.5	738.2	694.7
12°	863.8	862.2	854.8	845.8	832.6	817.8	798.1	777.6	753.8	731.6	684.0
13°	868.8	863.8	856.4	848.2	833.4	816.2	794.9	772.7	749.7	725.9	675.0
14°	867.9	867.1	860.5	849.0	832.6	814.6	794.0	767.8	743.9	719.3	664.3
15°	868.8	867.9	860.5	849.9	831.8	812.1	791.6	764.5	738.2	711.9	653.6
16°	868.8	868.8	858.9	848.2	831.0	809.6	786.6	761.2	732.4	706.2	644.6
17°	868.8	868.8	860.5	845.8	828.5	808.0	781.7	754.6	725.9	698.0	631.4
18°	870.4	867.9	857.3	844.9	825.2	803.9	778.4	749.7	720.1	688.9	622.4
19°	866.3	864.6	855.6	840.0	822.8	799.0	773.5	743.9	714.4	681.5	611.7
20°	863.8	866.3	854.0	837.6	817.8	794.9	768.6	738.2	706.2	673.3	601.1
21°	864.6	863.8	850.7	833.4	814.6	789.1	762.8	731.6	697.1	663.5	591.2
22.5°	863.0	860.5	846.6	827.7	804.7	781.7	753.0	721.0	684.0	646.2	572.3
23°	859.7	857.3	846.6	826.1	801.4	778.4	748.0	714.4	679.1	640.5	567.4
24°	846.6	845.8	840.8	820.3	797.3	771.9	742.3	703.7	664.3	624.1	555.1
25°	831.0	832.6	830.2	817.0	790.7	764.5	733.3	690.6	650.3	613.4	540.3
26°	816.2	816.2	814.6	809.6	784.2	756.3	720.1	675.0	636.4	597.8	524.7
27°	797.3	800.6	797.3	794.9	777.6	747.2	706.2	664.3	620.8	583.0	511.6
28°	782.5	782.5	780.9	776.8	771.0	736.6	691.4	648.7	606.0	569.9	496.8
29°	756.3	761.2	762.0	762.8	762.0	722.6	677.4	631.4	590.4	551.0	482.8
30°	732.4	737.4	740.7	746.4	747.2	710.3	661.0	617.5	575.6	537.0	470.5
32.5°	667.6	676.6	685.6	695.5	700.4	673.3	620.8	573.1	530.4	496.0	432.7
35°	606.0	608.5	618.3	641.3	646.2	629.0	573.1	528.0	487.8	454.9	397.4
37.5°	536.2	541.1	555.1	581.4	583.0	569.0	530.4	477.9	440.1	411.4	361.3
40°	478.7	481.2	491.0	513.2	520.6	511.6	477.9	430.3	395.8	367.9	326.8
42.5°	421.2	424.5	436.8	454.1	464.8	454.1	424.5	383.5	349.8	329.3	294.0
45°	373.6	377.7	389.2	399.1	402.4	395.8	369.5	335.8	312.0	290.7	263.6
47.5°	332.6	336.7	344.9	349.0	353.1	346.5	326.0	298.1	274.3	257.0	232.4
50°	301.4	300.5	306.3	307.9	307.9	300.5	283.3	260.3	240.6	226.6	206.1
52.5°	266.0	267.7	271.8	270.2	269.3	262.8	248.0	228.3	211.9	199.5	180.6
55°	240.6	238.1	240.6	238.9	235.7	229.1	216.0	199.5	185.6	174.9	157.7
57.5°	212.7	212.7	213.5	210.2	206.1	198.7	187.2	174.1	161.8	152.7	138.8
60°	187.2	188.9	188.0	184.8	180.6	172.4	163.4	150.3	139.6	133.0	119.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	<i>127.3</i>	127.3	124.8	122.3	116.6	109.2	102.6	94.4	88.7	82.9	74.7
70°	<i>108.4</i>	110.0	106.7	102.6	98.5	93.6	86.2	79.6	73.9	69.8	63.2
72.5°	<i>93.6</i>	92.8	90.3	86.2	82.9	77.2	70.6	65.7	60.8	57.5	52.6
75°	<i>77.2</i>	77.2	74.7	71.4	67.3	62.4	57.5	53.4	49.3	46.0	43.5
77.5°	<i>61.6</i>	62.4	59.9	57.5	54.2	49.3	45.2	41.9	38.6	36.1	34.5
80°	<i>47.6</i>	48.4	46.0	44.3	40.2	37.8	34.5	31.2	28.7	27.1	26.3
82.5°	<i>36.1</i>	35.3	33.7	32.8	29.6	27.1	23.8	22.2	20.5	18.9	18.9
85°	<i>23.8</i>	23.0	22.2	21.3	18.9	16.4	15.6	14.0	12.3	11.5	11.5
87.5°	<i>12.3</i>	12.3	11.5	10.7	9.9	8.2	7.4	5.7	4.9	4.9	4.9
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°	766.9	766.9	766.9
1°	763.6	760.4	759.5
2°	753.8	748.9	749.7
3°	744.8	739.0	733.3
4°	733.3	724.2	724.2
5°	723.4	714.4	711.9
6°	714.4	699.6	696.3
7°	706.2	688.1	682.4
8°	692.2	674.1	668.4
9°	682.4	662.7	656.9
10°	669.2	649.5	638.8
11°	658.5	636.4	628.2
12°	647.0	620.0	611.7
13°	633.9	606.0	601.1
14°	621.6	594.5	585.5
15°	608.5	580.5	569.9
16°	594.5	566.6	556.7
17°	583.0	551.8	544.4
18°	571.5	538.7	527.2
19°	557.5	526.3	513.2
20°	545.2	510.7	500.1
21°	532.1	499.2	487.8
22.5°	514.0	477.1	466.4
23°	508.3	470.5	459.0
24°	495.1	457.4	447.5
25°	482.0	447.5	436.8
26°	470.5	432.7	422.9
27°	459.0	421.2	410.6
28°	446.7	408.9	400.7
29°	434.4	395.8	387.6
30°	421.2	386.8	372.8
32.5°	388.4	357.2	345.7
35°	356.4	329.3	319.4
37.5°	325.2	303.0	294.0
40°	298.1	278.4	269.3
42.5°	270.2	252.1	243.1
45°	241.4	226.6	217.6
47.5°	215.1	202.8	193.0
50°	191.3	179.0	174.1
52.5°	168.3	160.1	162.6
55°	147.0	147.0	146.2
57.5°	126.5	132.2	133.0
60°	110.9	118.2	119.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	76.4	80.5	82.1
70°	65.7	69.0	69.8
72.5°	55.8	58.3	59.9
75°	45.2	48.4	48.4
77.5°	37.0	38.6	39.4
80°	27.9	28.7	29.6
82.5°	19.7	20.5	21.3
85°	11.5	12.3	13.1
87.5°	4.9	4.9	4.9
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°	165.9	167.5	165.0	160.9	156.8	149.4	141.2	129.7	121.5	115.0	103.5
65°	145.3	146.2	144.5	140.4	136.3	128.9	120.7	110.9	104.3	97.7	87.9

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62.5°	99.4	105.1	105.9
65°	87.0	92.0	92.8

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Scaled Data Report



(END OF REPORT)