

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: P838421

Luminaire Tested: HCSQ620D010-HM60525830-61SQLWW

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838421  
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-HM60525830-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

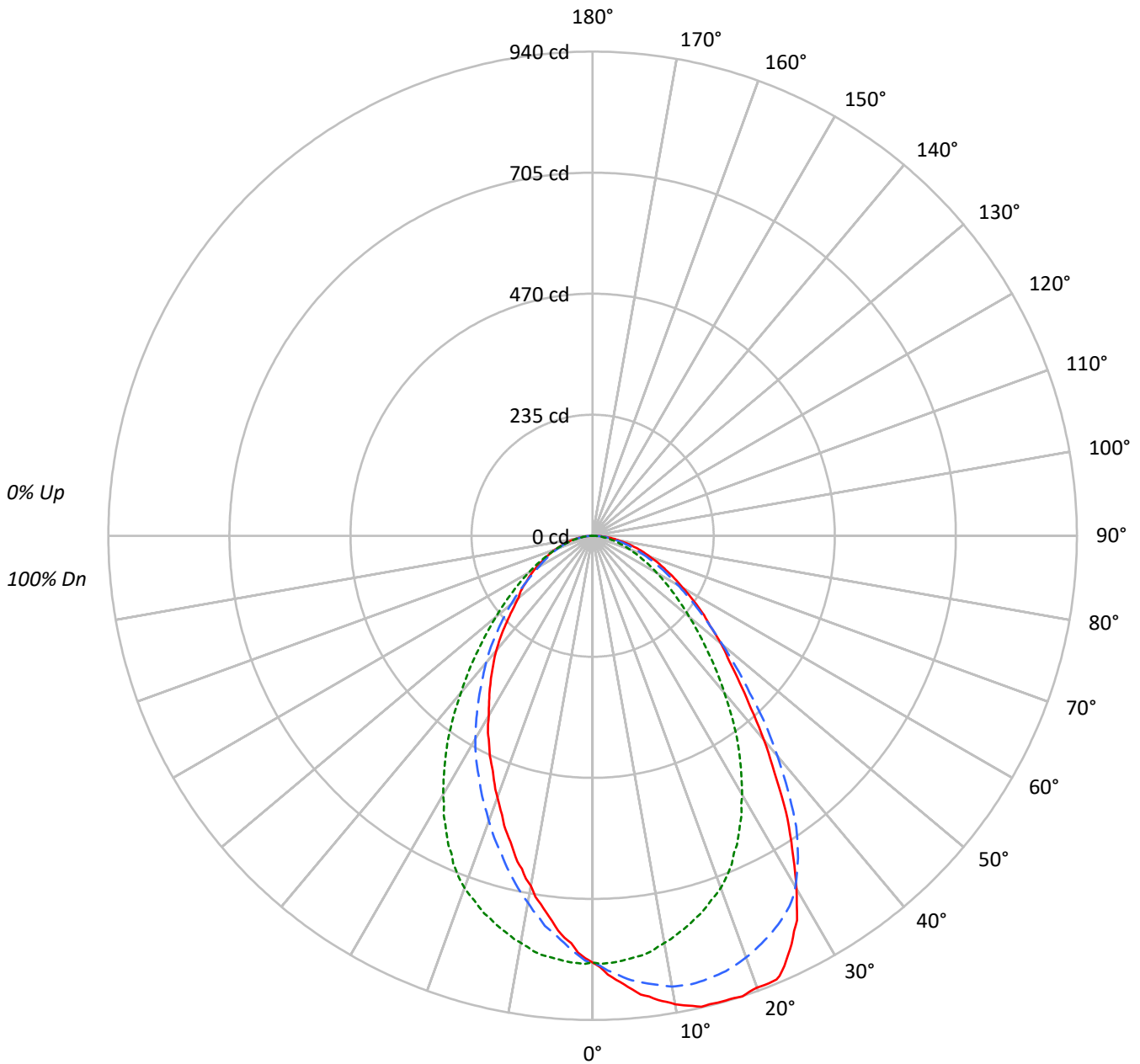
Lumens per Lamp: N/A  
Luminaire Lumens: 1566.7 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	80261	80261	80261	80261	80261
5°	86004	84234	80140	75997	74791
10°	90835	87431	78971	71112	67885
15°	94125	89055	77135	65922	61740
20°	96206	89804	74990	60722	55691
25°	95955	89788	70825	55658	50441
30°	88516	88063	64891	50908	45047
35°	77415	81460	58114	45531	40813
40°	65406	70503	50256	40721	36800
45°	55294	59069	43019	35730	32209
50°	49057	49531	36894	31152	28349
55°	43896	42402	31905	26821	26669
60°	39176	36958	27842	23211	25091
65°	35989	32848	24206	21547	22969
70°	33168	29387	21357	20110	21357
75°	31216	26220	18603	18266	19576
80°	28675	23515	16346	16848	17796
85°	28566	21174	13783	13783	15784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 59555 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.1	5.0
10°-20°	217.8	13.9
20°-30°	310.7	19.8
30°-40°	320.2	20.4
40°-50°	257.7	16.5
50°-60°	182.3	11.6
60°-70°	118.1	7.5
70°-80°	63.5	4.1
80°-90°	18.3	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°	606.6	38.7
0°-40°	926.8	59.2
0°-60°	1366.8	87.2
0°-90°	1566.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1566.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	828	828	828	828	828	
5°	884	866	824	782	769	86
15°	938	888	769	657	616	265
25°	898	840	663	521	472	409
35°	655	689	491	385	345	406
45°	404	431	314	261	235	315
55°	260	251	189	159	158	232
65°	157	143	106	94	100	157
75°	83	70	50	49	52	88
85°	26	19	12	12	14	28
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°	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5	828.5
1°	837.4	840.9	838.3	838.3	835.6	834.7	836.5	833.8	832.9	831.2	827.6
2°	852.5	849.8	848.9	849.8	844.5	844.5	841.8	836.5	833.8	830.3	820.5
3°	863.1	861.3	859.6	858.7	853.3	848.9	845.4	839.2	833.8	829.4	815.2
4°	872.9	872.9	871.1	867.5	862.2	856.9	849.8	842.7	834.7	826.7	808.1
5°	884.4	885.3	877.3	876.4	870.2	862.2	854.2	844.5	834.7	824.1	803.7
6°	895.9	891.5	889.7	883.5	874.6	867.5	857.8	847.1	833.8	821.4	793.9
7°	901.2	900.4	895.9	889.7	881.7	870.2	860.4	846.2	832.1	819.6	786.8
8°	910.1	910.1	904.8	896.8	885.3	874.6	862.2	845.4	831.2	815.2	777.1
9°	916.3	916.3	909.2	902.1	891.5	877.3	863.1	844.5	826.7	808.1	768.2
10°	923.4	921.6	916.3	905.7	896.8	880.8	863.1	843.6	824.1	802.8	759.3
11°	928.7	926.1	919.9	911.9	897.7	881.7	863.1	843.6	820.5	797.5	750.4
12°	933.2	931.4	923.4	913.7	899.5	883.5	862.2	840.0	814.3	790.4	738.9
13°	938.5	933.2	925.2	916.3	900.4	881.7	858.7	834.7	809.9	784.2	729.2
14°	937.6	936.7	929.6	917.2	899.5	880.0	857.8	829.4	803.7	777.1	717.6
15°	938.5	937.6	929.6	918.1	898.6	877.3	855.1	825.8	797.5	769.1	706.1
16°	938.5	938.5	927.9	916.3	897.7	874.6	849.8	822.3	791.3	762.9	696.3
17°	938.5	938.5	929.6	913.7	895.0	872.9	844.5	815.2	784.2	754.0	682.1
18°	940.3	937.6	926.1	912.8	891.5	868.4	840.9	809.9	777.9	744.2	672.4
19°	935.8	934.1	924.3	907.5	888.8	863.1	835.6	803.7	771.7	736.3	660.9
20°	933.2	935.8	922.5	904.8	883.5	858.7	830.3	797.5	762.9	727.4	649.3
21°	934.1	933.2	919.0	900.4	880.0	852.5	824.1	790.4	753.1	716.7	638.7
22.5°	932.3	929.6	914.6	894.1	869.3	844.5	813.4	778.8	738.9	698.1	618.3
23°	928.7	926.1	914.6	892.4	865.8	840.9	808.1	771.7	733.6	691.9	613.0
24°	914.6	913.7	908.3	886.2	861.3	833.8	801.9	760.2	717.6	674.2	599.6
25°	897.7	899.5	896.8	882.6	854.2	825.8	792.1	746.0	702.5	662.6	583.7
26°	881.7	881.7	880.0	874.6	847.1	817.0	777.9	729.2	687.5	645.8	566.8
27°	861.3	864.9	861.3	858.7	840.0	807.2	762.9	717.6	670.6	629.8	552.6
28°	845.4	845.4	843.6	839.2	832.9	795.7	746.9	700.8	654.6	615.6	536.7
29°	817.0	822.3	823.2	824.1	823.2	780.6	731.8	682.1	637.8	595.2	521.6
30°	791.3	796.6	800.1	806.3	807.2	767.3	714.1	667.1	621.8	580.1	508.3
32.5°	721.2	730.9	740.7	751.3	756.7	727.4	670.6	619.2	573.0	535.8	467.5
35°	654.6	657.3	668.0	692.8	698.1	679.5	619.2	570.4	526.9	491.4	429.3
37.5°	579.2	584.6	599.6	628.0	629.8	614.7	573.0	516.3	475.5	444.4	390.3
40°	517.2	519.8	530.5	554.4	562.4	552.6	516.3	464.8	427.6	397.4	353.0
42.5°	455.1	458.6	471.9	490.5	502.1	490.5	458.6	414.3	377.9	355.7	317.6
45°	403.6	408.0	420.5	431.1	434.7	427.6	399.2	362.8	337.1	314.0	284.7
47.5°	359.3	363.7	372.6	377.0	381.4	374.3	352.2	322.0	296.3	277.6	251.0
50°	325.5	324.7	330.9	332.6	332.6	324.7	306.0	281.2	259.9	244.8	222.7
52.5°	287.4	289.2	293.6	291.8	291.0	283.9	267.9	246.6	228.9	215.6	195.2
55°	259.9	257.2	259.9	258.1	254.6	247.5	233.3	215.6	200.5	188.9	170.3
57.5°	229.7	229.7	230.6	227.1	222.7	214.7	202.2	188.1	174.7	165.0	149.9
60°	202.2	204.0	203.1	199.6	195.2	186.3	176.5	162.3	150.8	143.7	129.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	137.5	137.5	134.8	132.2	126.0	118.0	110.9	102.0	95.8	89.6	80.7
70°	117.1	118.9	115.3	110.9	106.4	101.1	93.1	86.0	79.8	75.4	68.3
72.5°	101.1	100.2	97.6	93.1	89.6	83.4	76.3	71.0	65.6	62.1	56.8
75°	83.4	83.4	80.7	77.2	72.7	67.4	62.1	57.7	53.2	49.7	47.0
77.5°	66.5	67.4	64.8	62.1	58.5	53.2	48.8	45.2	41.7	39.0	37.3
80°	51.4	52.3	49.7	47.9	43.5	40.8	37.3	33.7	31.0	29.3	28.4
82.5°	39.0	38.1	36.4	35.5	31.9	29.3	25.7	24.0	22.2	20.4	20.4
85°	25.7	24.8	24.0	23.1	20.4	17.7	16.9	15.1	13.3	12.4	12.4
87.5°	13.3	13.3	12.4	11.5	10.6	8.9	8.0	6.2	5.3	5.3	5.3
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°	828.5	828.5	828.5
1°	825.0	821.4	820.5
2°	814.3	809.0	809.9
3°	804.6	798.3	792.1
4°	792.1	782.4	782.4
5°	781.5	771.7	769.1
6°	771.7	755.8	752.2
7°	762.9	743.4	737.1
8°	747.8	728.3	722.1
9°	737.1	715.9	709.6
10°	722.9	701.7	690.1
11°	711.4	687.5	678.6
12°	699.0	669.7	660.9
13°	684.8	654.6	649.3
14°	671.5	642.2	632.5
15°	657.3	627.1	615.6
16°	642.2	612.1	601.4
17°	629.8	596.1	588.1
18°	617.4	581.9	569.5
19°	602.3	568.6	554.4
20°	589.0	551.7	540.2
21°	574.8	539.3	526.9
22.5°	555.3	515.4	503.8
23°	549.1	508.3	495.9
24°	534.9	494.1	483.4
25°	520.7	483.4	471.9
26°	508.3	467.5	456.8
27°	495.9	455.1	443.5
28°	482.6	441.8	432.9
29°	469.3	427.6	418.7
30°	455.1	417.8	402.7
32.5°	419.6	385.9	373.4
35°	385.0	355.7	345.1
37.5°	351.3	327.3	317.6
40°	322.0	300.7	291.0
42.5°	291.8	272.3	262.6
45°	260.8	244.8	235.1
47.5°	232.4	219.1	208.5
50°	206.7	193.4	188.1
52.5°	181.8	173.0	175.6
55°	158.8	158.8	157.9
57.5°	136.6	142.8	143.7
60°	119.8	127.7	129.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	82.5	86.9	88.7
70°	71.0	74.5	75.4
72.5°	60.3	63.0	64.8
75°	48.8	52.3	52.3
77.5°	39.9	41.7	42.6
80°	30.2	31.0	31.9
82.5°	21.3	22.2	23.1
85°	12.4	13.3	14.2
87.5°	5.3	5.3	5.3
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°

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Scaled Data Report





62.5°	179.2	181.0	178.3	173.9	169.4	161.4	152.6	140.2	131.3	124.2	111.8
65°	157.0	157.9	156.1	151.7	147.3	139.3	130.4	119.8	112.7	105.6	94.9

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Scaled Data Report



62.5°	107.3	113.5	114.4
65°	94.0	99.3	100.2

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Scaled Data Report



(END OF REPORT)