

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: P838426

Luminaire Tested: HCSQ620D010-HM60525835-61SQLWW

Issue Date: 5/21/2024



**Test Information**

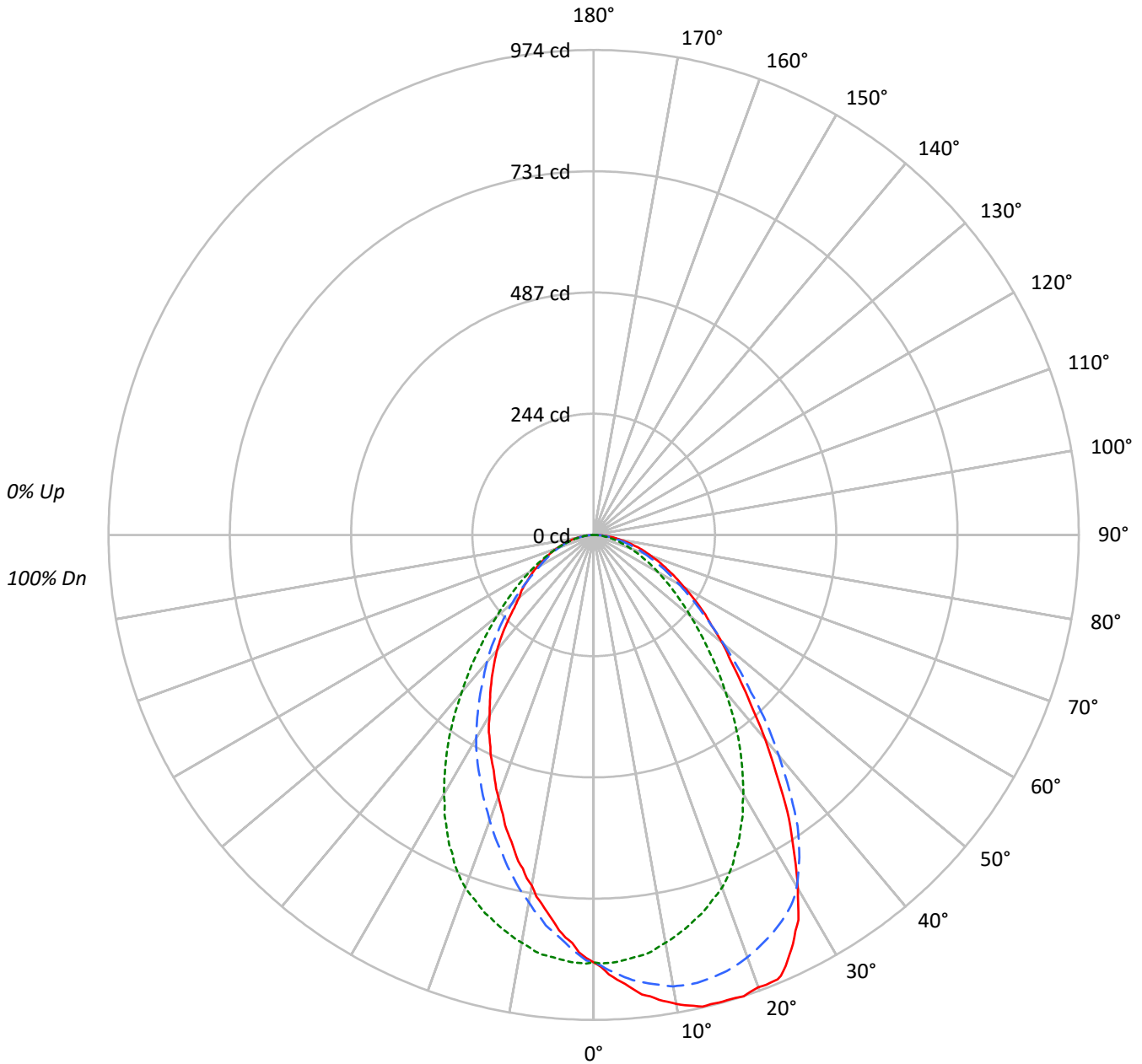
Test Method: LM-79-2019  
Report Number: P838426  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525835-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1623.2 lumens  
Efficiency: N/A  
Efficacy: 81.2 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					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					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51					51			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46					46			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42					42			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38					38			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34					34			
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32					32			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	83158	83158	83158	83158	83158
5°	89106	87273	83028	78740	77485
10°	94110	90584	81814	73679	70334
15°	97515	92264	79913	68299	63967
20°	99670	93041	77691	62907	57701
25°	99419	93027	73380	57667	52259
30°	91705	91240	67240	52743	46669
35°	80206	84398	60208	47175	42279
40°	67758	73051	52064	42188	38116
45°	57294	61192	44567	37018	33360
50°	50835	51317	38235	32267	29359
55°	45484	43930	33070	27784	27632
60°	40591	38285	28850	24044	26001
65°	37295	34029	25077	22327	23817
70°	34358	30463	22121	20818	22121
75°	32339	27174	19276	18902	20287
80°	29735	24352	16904	17406	18466
85°	29678	21953	14339	14339	16339

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 61692 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.0	5.0
10°-20°	225.7	13.9
20°-30°	321.9	19.8
30°-40°	331.7	20.4
40°-50°	267.0	16.5
50°-60°	188.8	11.6
60°-70°	122.4	7.5
70°-80°	65.7	4.0
80°-90°	19.0	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°	628.5	38.7
0°-40°	960.2	59.2
0°-60°	1416.1	87.2
0°-90°	1623.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1623.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	858	858	858	858	858	
5°	916	897	854	810	797	89
15°	972	920	797	681	638	275
25°	930	870	686	540	489	423
35°	678	714	509	399	358	421
45°	418	447	325	270	244	327
55°	269	260	196	164	164	241
65°	163	148	109	97	104	162
75°	86	73	52	50	54	92
85°	27	20	13	13	15	29
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°	858.4	858.4	858.4	858.4	858.4	858.4	858.4	858.4	858.4	858.4	858.4
1°	867.6	871.2	868.5	868.5	865.7	864.8	866.7	863.9	863.0	861.1	857.5
2°	883.2	880.4	879.5	880.4	874.9	874.9	872.2	866.7	863.9	860.2	850.1
3°	894.2	892.4	890.5	889.6	884.1	879.5	875.8	869.4	863.9	859.3	844.6
4°	904.3	904.3	902.5	898.8	893.3	887.8	880.4	873.1	864.8	856.5	837.2
5°	916.3	917.2	908.9	908.0	901.6	893.3	885.0	874.9	864.8	853.8	832.6
6°	928.2	923.6	921.8	915.4	906.2	898.8	888.7	877.7	863.9	851.0	822.5
7°	933.7	932.8	928.2	921.8	913.5	901.6	891.5	876.8	862.1	849.2	815.2
8°	942.9	942.9	937.4	929.1	917.2	906.2	893.3	875.8	861.1	844.6	805.1
9°	949.4	949.4	942.0	934.7	923.6	908.9	894.2	874.9	856.5	837.2	795.9
10°	956.7	954.9	949.4	938.3	929.1	912.6	894.2	874.0	853.8	831.7	786.7
11°	962.2	959.5	953.0	944.8	930.1	913.5	894.2	874.0	850.1	826.2	777.5
12°	966.8	965.0	956.7	946.6	931.9	915.4	893.3	870.3	843.7	818.9	765.6
13°	972.3	966.8	958.6	949.4	932.8	913.5	889.6	864.8	839.1	812.4	755.4
14°	971.4	970.5	963.2	950.3	931.9	911.7	888.7	859.3	832.6	805.1	743.5
15°	972.3	971.4	963.2	951.2	931.0	908.9	886.0	855.6	826.2	796.8	731.6
16°	972.3	972.3	961.3	949.4	930.1	906.2	880.4	851.9	819.8	790.4	721.4
17°	972.3	972.3	963.2	946.6	927.3	904.3	874.9	844.6	812.4	781.2	706.7
18°	974.2	971.4	959.5	945.7	923.6	899.7	871.2	839.1	806.0	771.1	696.6
19°	969.6	967.7	957.6	940.2	920.9	894.2	865.7	832.6	799.6	762.8	684.7
20°	966.8	969.6	955.8	937.4	915.4	889.6	860.2	826.2	790.4	753.6	672.7
21°	967.7	966.8	952.1	932.8	911.7	883.2	853.8	818.9	780.3	742.6	661.7
22.5°	965.9	963.2	947.5	926.4	900.7	874.9	842.8	806.9	765.6	723.3	640.6
23°	962.2	959.5	947.5	924.6	897.0	871.2	837.2	799.6	760.0	716.8	635.1
24°	947.5	946.6	941.1	918.1	892.4	863.9	830.8	787.6	743.5	698.5	621.3
25°	930.1	931.9	929.1	914.4	885.0	855.6	820.7	772.9	727.9	686.5	604.7
26°	913.5	913.5	911.7	906.2	877.7	846.4	806.0	755.4	712.3	669.1	587.3
27°	892.4	896.1	892.4	889.6	870.3	836.3	790.4	743.5	694.8	652.5	572.6
28°	875.8	875.8	874.0	869.4	863.0	824.4	773.8	726.0	678.2	637.8	556.0
29°	846.4	851.9	852.9	853.8	852.9	808.8	758.2	706.7	660.8	616.7	540.4
30°	819.8	825.3	829.0	835.4	836.3	795.0	739.8	691.1	644.2	601.1	526.6
32.5°	747.2	757.3	767.4	778.4	783.9	753.6	694.8	641.5	593.7	555.1	484.3
35°	678.2	681.0	692.0	717.8	723.3	704.0	641.5	590.9	545.9	509.1	444.8
37.5°	600.1	605.6	621.3	650.7	652.5	636.9	593.7	534.9	492.6	460.4	404.4
40°	535.8	538.6	549.6	574.4	582.7	572.6	534.9	481.6	443.0	411.7	365.8
42.5°	471.5	475.1	488.9	508.2	520.2	508.2	475.1	429.2	391.5	368.5	329.0
45°	418.2	422.8	435.6	446.7	450.3	443.0	413.6	375.9	349.2	325.3	295.0
47.5°	372.2	376.8	386.0	390.6	395.2	387.8	364.9	333.6	307.0	287.7	260.1
50°	337.3	336.4	342.8	344.6	344.6	336.4	317.1	291.3	269.3	253.7	230.7
52.5°	297.8	299.6	304.2	302.4	301.4	294.1	277.5	255.5	237.1	223.3	202.2
55°	269.3	266.5	269.3	267.4	263.8	256.4	241.7	223.3	207.7	195.8	176.5
57.5°	238.0	238.0	238.9	235.3	230.7	222.4	209.5	194.8	181.1	170.9	155.3
60°	209.5	211.4	210.5	206.8	202.2	193.0	182.9	168.2	156.2	148.9	134.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	142.5	142.5	139.7	136.9	130.5	122.2	114.9	105.7	99.3	92.8	83.6
70°	121.3	123.2	119.5	114.9	110.3	104.8	96.5	89.1	82.7	78.1	70.8
72.5°	104.8	103.9	101.1	96.5	92.8	86.4	79.0	73.5	68.0	64.3	58.8
75°	86.4	86.4	83.6	80.0	75.4	69.8	64.3	59.7	55.1	51.5	48.7
77.5°	68.9	69.8	67.1	64.3	60.7	55.1	50.5	46.9	43.2	40.4	38.6
80°	53.3	54.2	51.5	49.6	45.0	42.3	38.6	34.9	32.2	30.3	29.4
82.5°	40.4	39.5	37.7	36.8	33.1	30.3	26.7	24.8	23.0	21.1	21.1
85°	26.7	25.7	24.8	23.9	21.1	18.4	17.5	15.6	13.8	12.9	12.9
87.5°	13.8	13.8	12.9	11.9	11.0	9.2	8.3	6.4	5.5	5.5	5.5
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°	858.4	858.4	858.4
1°	854.7	851.0	850.1
2°	843.7	838.2	839.1
3°	833.6	827.1	820.7
4°	820.7	810.6	810.6
5°	809.7	799.6	796.8
6°	799.6	783.0	779.3
7°	790.4	770.2	763.7
8°	774.7	754.5	748.1
9°	763.7	741.7	735.2
10°	749.0	727.0	715.0
11°	737.1	712.3	703.1
12°	724.2	693.9	684.7
13°	709.5	678.2	672.7
14°	695.7	665.4	655.3
15°	681.0	649.8	637.8
16°	665.4	634.1	623.1
17°	652.5	617.6	609.3
18°	639.6	602.9	590.0
19°	624.0	589.1	574.4
20°	610.2	571.6	559.7
21°	595.5	558.8	545.9
22.5°	575.3	534.0	522.0
23°	568.9	526.6	513.7
24°	554.2	511.9	500.9
25°	539.5	500.9	488.9
26°	526.6	484.3	473.3
27°	513.7	471.5	459.5
28°	500.0	457.7	448.5
29°	486.2	443.0	433.8
30°	471.5	432.9	417.2
32.5°	434.7	399.8	386.9
35°	398.9	368.5	357.5
37.5°	363.9	339.1	329.0
40°	333.6	311.6	301.4
42.5°	302.4	282.1	272.0
45°	270.2	253.7	243.5
47.5°	240.8	227.0	216.0
50°	214.1	200.4	194.8
52.5°	188.4	179.2	182.0
55°	164.5	164.5	163.6
57.5°	141.5	148.0	148.9
60°	124.1	132.3	134.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	85.5	90.1	91.9
70°	73.5	77.2	78.1
72.5°	62.5	65.3	67.1
75°	50.5	54.2	54.2
77.5°	41.4	43.2	44.1
80°	31.2	32.2	33.1
82.5°	22.1	23.0	23.9
85°	12.9	13.8	14.7
87.5°	5.5	5.5	5.5
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°	185.6	187.5	184.7	180.1	175.5	167.3	158.1	145.2	136.0	128.7	115.8
65°	162.7	163.6	161.8	157.2	152.6	144.3	135.1	124.1	116.7	109.4	98.3

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Scaled Data Report





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Scaled Data Report



62.5°	111.2	117.6	118.6
65°	97.4	102.9	103.9

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Scaled Data Report



(END OF REPORT)