

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: P838301

Luminaire Tested: HCSQ607D010-HM60525830-61SQLWW

Issue Date: 5/21/2024



**Test Information**

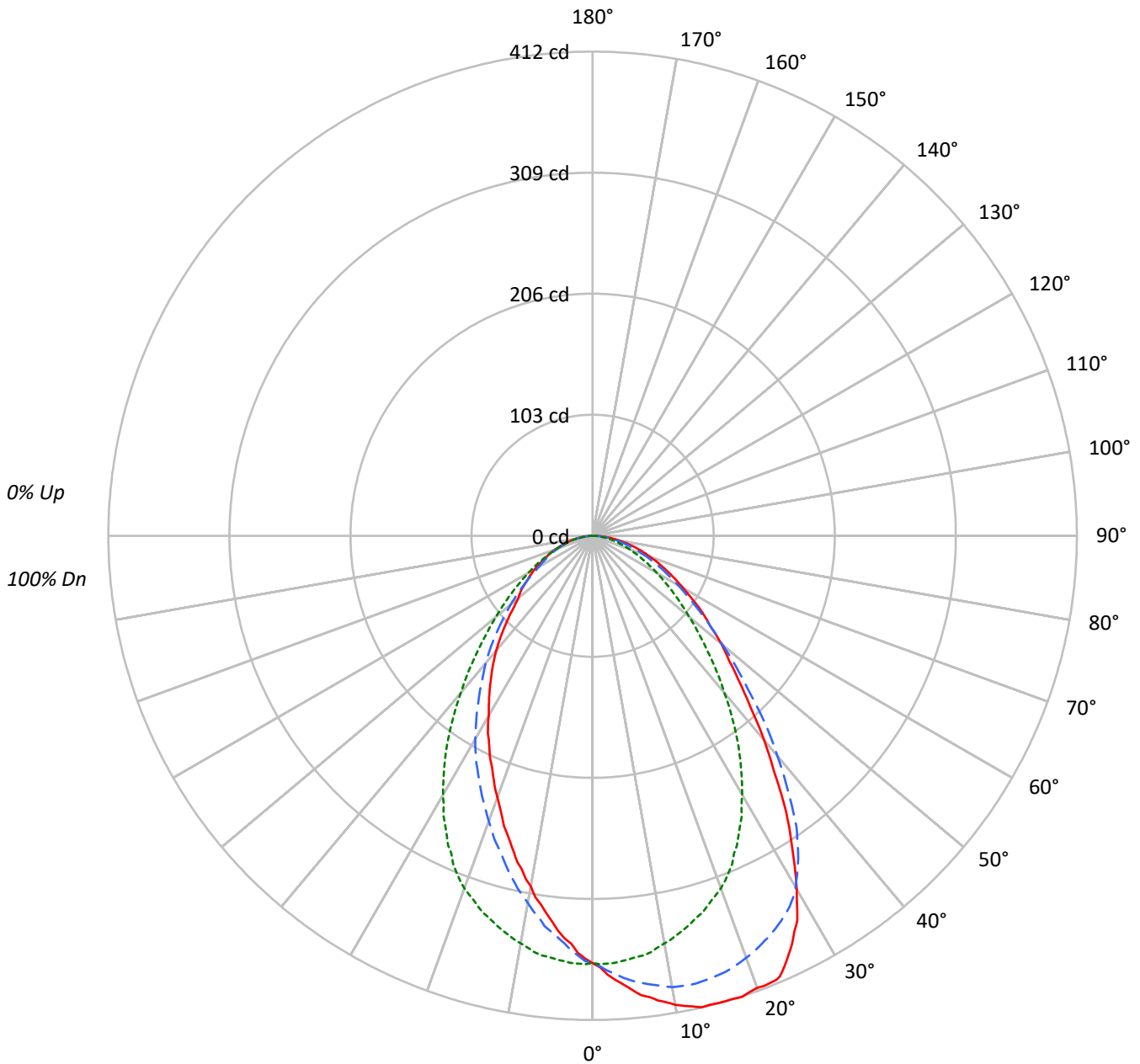
Test Method: LM-79-2019  
Report Number: P838301  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ607D010-HM60525830-61SQLWW  
Description: 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: 687.4 lumens  
Efficiency: N/A  
Efficacy: 85.9 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): 8  
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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CATALOG NUMBER: HCSQ607D010-HM60525830-61SQLWW

### Luminous Intensity Polar Plot





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CATALOG NUMBER: HCSQ607D010-HM60525830-61SQLWW

**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°	35214	35214	35214	35214	35214
5°	37731	36958	35164	33345	32811
10°	39859	38364	34646	31203	29786
15°	41301	39074	33839	28924	27089
20°	42206	39397	32897	26639	24433
25°	42104	39394	31073	24424	22137
30°	38839	38643	28469	22339	19766
35°	33965	35739	25498	19975	17905
40°	28694	30939	22055	17869	16149
45°	24263	25914	18879	15673	14125
50°	21522	21725	16186	13670	12434
55°	19254	18604	14002	11772	11705
60°	17186	16207	12206	10172	11005
65°	15794	14407	10613	9467	10086
70°	14559	12902	9375	8809	9375
75°	13699	11510	8160	8010	8609
80°	12608	10321	7141	7364	7810
85°	12560	9337	6002	6002	6891

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 26126 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	5.0
10°-20°	95.6	13.9
20°-30°	136.3	19.8
30°-40°	140.5	20.4
40°-50°	113.1	16.5
50°-60°	80.0	11.6
60°-70°	51.8	7.5
70°-80°	27.8	4.1
80°-90°	8.0	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°	266.2	38.7
0°-40°	406.6	59.2
0°-60°	599.7	87.2
0°-90°	687.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	687.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	364	364	364	364	364	
5°	388	380	362	343	337	38
15°	412	390	337	288	270	116
25°	394	369	291	228	207	179
35°	287	302	216	169	151	178
45°	177	189	138	114	103	138
55°	114	110	83	70	69	102
65°	69	63	46	41	44	69
75°	37	31	22	21	23	39
85°	11	8	5	5	6	12
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°	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
1°	367.4	369.0	367.8	367.8	366.6	366.2	367.0	365.8	365.5	364.7	363.1
2°	374.0	372.9	372.5	372.9	370.5	370.5	369.3	367.0	365.8	364.3	360.0
3°	378.7	377.9	377.1	376.7	374.4	372.5	370.9	368.2	365.8	363.9	357.7
4°	383.0	383.0	382.2	380.6	378.3	376.0	372.9	369.7	366.2	362.7	354.6
5°	388.0	388.4	384.9	384.5	381.8	378.3	374.8	370.5	366.2	361.6	352.6
6°	393.1	391.1	390.4	387.6	383.7	380.6	376.4	371.7	365.8	360.4	348.3
7°	395.4	395.0	393.1	390.4	386.9	381.8	377.5	371.3	365.1	359.6	345.2
8°	399.3	399.3	397.0	393.5	388.4	383.7	378.3	370.9	364.7	357.7	340.9
9°	402.0	402.0	398.9	395.8	391.1	384.9	378.7	370.5	362.7	354.6	337.0
10°	405.2	404.4	402.0	397.4	393.5	386.5	378.7	370.1	361.6	352.2	333.2
11°	407.5	406.3	403.6	400.1	393.9	386.9	378.7	370.1	360.0	349.9	329.3
12°	409.4	408.7	405.2	400.9	394.6	387.6	378.3	368.6	357.3	346.8	324.2
13°	411.8	409.4	405.9	402.0	395.0	386.9	376.7	366.2	355.3	344.1	319.9
14°	411.4	411.0	407.9	402.4	394.6	386.1	376.4	363.9	352.6	340.9	314.9
15°	411.8	411.4	407.9	402.8	394.3	384.9	375.2	362.3	349.9	337.4	309.8
16°	411.8	411.8	407.1	402.0	393.9	383.7	372.9	360.8	347.2	334.7	305.5
17°	411.8	411.8	407.9	400.9	392.7	383.0	370.5	357.7	344.1	330.8	299.3
18°	412.5	411.4	406.3	400.5	391.1	381.0	369.0	355.3	341.3	326.5	295.0
19°	410.6	409.8	405.5	398.1	390.0	378.7	366.6	352.6	338.6	323.0	290.0
20°	409.4	410.6	404.8	397.0	387.6	376.7	364.3	349.9	334.7	319.1	284.9
21°	409.8	409.4	403.2	395.0	386.1	374.0	361.6	346.8	330.4	314.5	280.2
22.5°	409.0	407.9	401.3	392.3	381.4	370.5	356.9	341.7	324.2	306.3	271.3
23°	407.5	406.3	401.3	391.5	379.9	369.0	354.6	338.6	321.9	303.6	268.9
24°	401.3	400.9	398.5	388.8	377.9	365.8	351.8	333.5	314.9	295.8	263.1
25°	393.9	394.6	393.5	387.3	374.8	362.3	347.6	327.3	308.2	290.7	256.1
26°	386.9	386.9	386.1	383.7	371.7	358.5	341.3	319.9	301.6	283.3	248.7
27°	377.9	379.5	377.9	376.7	368.6	354.2	334.7	314.9	294.2	276.3	242.5
28°	370.9	370.9	370.1	368.2	365.5	349.1	327.7	307.5	287.2	270.1	235.5
29°	358.5	360.8	361.2	361.6	361.2	342.5	321.1	299.3	279.8	261.2	228.8
30°	347.2	349.5	351.1	353.8	354.2	336.7	313.3	292.7	272.8	254.5	223.0
32.5°	316.4	320.7	325.0	329.6	332.0	319.1	294.2	271.7	251.4	235.1	205.1
35°	287.2	288.4	293.1	304.0	306.3	298.1	271.7	250.3	231.2	215.6	188.4
37.5°	254.1	256.5	263.1	275.6	276.3	269.7	251.4	226.5	208.6	195.0	171.2
40°	226.9	228.1	232.7	243.2	246.8	242.5	226.5	203.9	187.6	174.4	154.9
42.5°	199.7	201.2	207.1	215.2	220.3	215.2	201.2	181.8	165.8	156.1	139.3
45°	177.1	179.0	184.5	189.1	190.7	187.6	175.1	159.2	147.9	137.8	124.9
47.5°	157.6	159.6	163.5	165.4	167.4	164.2	154.5	141.3	130.0	121.8	110.1
50°	142.8	142.4	145.2	145.9	145.9	142.4	134.3	123.4	114.0	107.4	97.7
52.5°	126.1	126.9	128.8	128.0	127.7	124.5	117.5	108.2	100.4	94.6	85.6
55°	114.0	112.9	114.0	113.3	111.7	108.6	102.4	94.6	88.0	82.9	74.7
57.5°	100.8	100.8	101.2	99.6	97.7	94.2	88.7	82.5	76.7	72.4	65.8
60°	88.7	89.5	89.1	87.6	85.6	81.7	77.5	71.2	66.2	63.0	56.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	60.3	60.3	59.2	58.0	55.3	51.8	48.6	44.8	42.0	39.3	35.4
70°	51.4	52.2	50.6	48.6	46.7	44.4	40.9	37.8	35.0	33.1	30.0
72.5°	44.4	44.0	42.8	40.9	39.3	36.6	33.5	31.1	28.8	27.2	24.9
75°	36.6	36.6	35.4	33.9	31.9	29.6	27.2	25.3	23.4	21.8	20.6
77.5°	29.2	29.6	28.4	27.2	25.7	23.4	21.4	19.8	18.3	17.1	16.3
80°	22.6	23.0	21.8	21.0	19.1	17.9	16.3	14.8	13.6	12.8	12.5
82.5°	17.1	16.7	16.0	15.6	14.0	12.8	11.3	10.5	9.7	9.0	9.0
85°	11.3	10.9	10.5	10.1	9.0	7.8	7.4	6.6	5.8	5.4	5.4
87.5°	5.8	5.8	5.4	5.1	4.7	3.9	3.5	2.7	2.3	2.3	2.3
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°	363.5	363.5	363.5
1°	362.0	360.4	360.0
2°	357.3	354.9	355.3
3°	353.0	350.3	347.6
4°	347.6	343.3	343.3
5°	342.9	338.6	337.4
6°	338.6	331.6	330.0
7°	334.7	326.1	323.4
8°	328.1	319.5	316.8
9°	323.4	314.1	311.4
10°	317.2	307.9	302.8
11°	312.1	301.6	297.7
12°	306.7	293.8	290.0
13°	300.5	287.2	284.9
14°	294.6	281.8	277.5
15°	288.4	275.2	270.1
16°	281.8	268.5	263.9
17°	276.3	261.5	258.0
18°	270.9	255.3	249.9
19°	264.3	249.5	243.2
20°	258.4	242.1	237.0
21°	252.2	236.6	231.2
22.5°	243.6	226.1	221.1
23°	240.9	223.0	217.6
24°	234.7	216.8	212.1
25°	228.5	212.1	207.1
26°	223.0	205.1	200.4
27°	217.6	199.7	194.6
28°	211.7	193.8	189.9
29°	205.9	187.6	183.7
30°	199.7	183.3	176.7
32.5°	184.1	169.3	163.9
35°	168.9	156.1	151.4
37.5°	154.1	143.6	139.3
40°	141.3	131.9	127.7
42.5°	128.0	119.5	115.2
45°	114.4	107.4	103.1
47.5°	102.0	96.1	91.5
50°	90.7	84.8	82.5
52.5°	79.8	75.9	77.1
55°	69.7	69.7	69.3
57.5°	59.9	62.7	63.0
60°	52.5	56.0	56.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	36.2	38.1	38.9
70°	31.1	32.7	33.1
72.5°	26.5	27.6	28.4
75°	21.4	23.0	23.0
77.5°	17.5	18.3	18.7
80°	13.2	13.6	14.0
82.5°	9.3	9.7	10.1
85°	5.4	5.8	6.2
87.5°	2.3	2.3	2.3
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°	78.6	79.4	78.2	76.3	74.3	70.8	66.9	61.5	57.6	54.5	49.0
65°	68.9	69.3	68.5	66.6	64.6	61.1	57.2	52.5	49.4	46.3	41.6

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62.5°	47.1	49.8	50.2
65°	41.3	43.6	44.0

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Scaled Data Report



(END OF REPORT)