

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: P838350

Luminaire Tested: HCSQ610D010-HM60525840-61SQH

Issue Date: 5/21/2024

**Test Information**

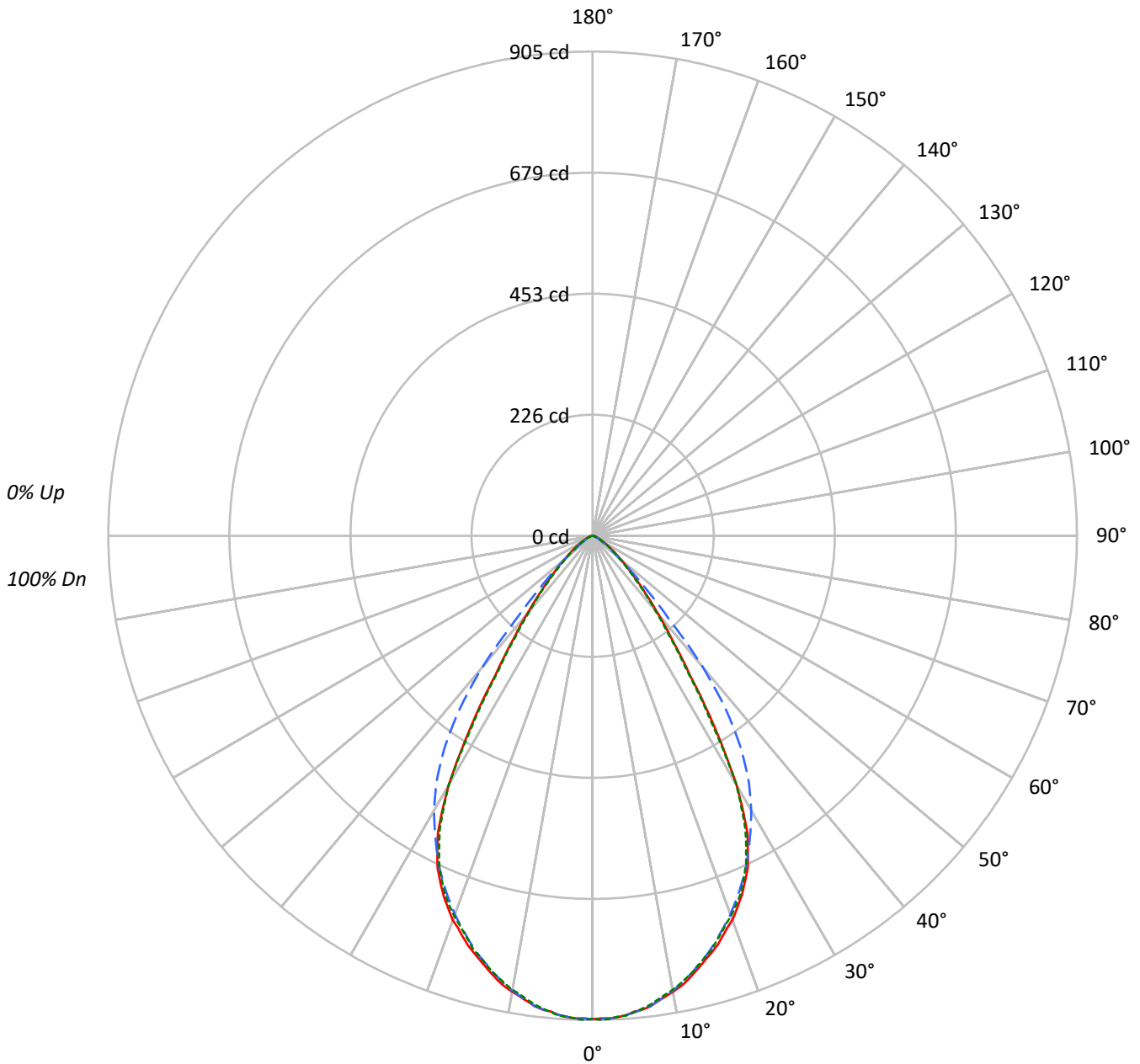
Test Method: LM-79-2019  
Report Number: P838350  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525840-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1015.8 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
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									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				100															
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92				92															
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85				85															
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78				78															
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71				71															
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66				66															
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61				61															
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56				56															
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52				52															
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48				48															
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45				45															

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

	0°	45°	90°
0°	38892	38892	38892
5°	38583	38647	38626
10°	37848	37761	37673
15°	36511	36310	36288
20°	35006	34502	34662
25°	32580	32295	32224
30°	26772	29467	26698
35°	16536	25303	16142
40°	10617	17935	10252
45°	6923	8695	6588
50°	4595	4327	4294
55°	3123	2259	2898
60°	2110	1378	1938
65°	1477	1019	1324
70°	944	755	881
75°	665	582	582
80°	496	372	372
85°	247	494	247

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8695 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.4	8.3
10°-20°	229.0	22.5
20°-30°	309.1	30.4
30°-40°	241.2	23.7
40°-50°	101.0	9.9
50°-60°	34.3	3.4
60°-70°	12.2	1.2
70°-80°	4.0	0.4
80°-90°	0.8	0.1
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°	622.4	61.3
0°-40°	863.6	85.0
0°-60°	998.9	98.3
0°-90°	1015.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1015.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	893	894	894	893	894	84
15°	819	817	815	814	814	230
25°	686	683	680	680	678	308
35°	315	369	481	369	307	207
45°	114	122	143	116	108	91
55°	42	38	30	36	39	38
65°	14	12	10	12	13	15
75°	4	4	4	4	4	4
85°	0	0	1	0	0	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	903.3	903.3	903.3	903.3	903.3
1°	902.3	903.8	902.8	903.3	904.8
2°	902.3	902.3	903.3	902.8	903.3
3°	901.3	901.3	900.2	900.2	900.2
4°	898.2	898.2	898.2	897.2	899.2
5°	892.7	893.7	894.2	892.7	893.7
6°	890.7	891.2	890.2	889.7	888.7
7°	886.2	884.7	886.2	882.7	883.2
8°	878.7	878.7	877.7	876.7	875.7
9°	871.7	871.7	870.7	869.2	868.2
10°	865.7	864.2	863.7	862.2	861.7
11°	858.7	855.7	855.2	853.7	853.7
12°	850.2	848.6	845.1	844.6	844.6
13°	839.6	838.1	835.6	833.6	835.6
14°	829.6	828.6	824.1	825.6	825.1
15°	819.1	817.1	814.6	813.6	814.1
16°	809.6	806.1	802.6	803.1	806.1
17°	799.6	794.5	791.0	790.5	792.0
18°	787.0	783.0	777.5	779.5	779.5
19°	774.5	769.0	765.5	765.0	767.0
20°	764.0	755.5	753.0	752.5	756.5
22.5°	727.9	719.4	717.4	719.4	723.4
25°	685.8	682.8	679.8	679.8	678.3
27.5°	626.2	633.2	636.7	629.7	618.2
30°	538.5	568.1	592.7	564.6	537.0
32.5°	424.3	485.4	542.1	483.9	414.3
35°	314.6	369.2	481.4	368.7	307.1
37.5°	242.5	277.5	409.3	273.0	235.5
40°	188.9	209.4	319.1	206.9	182.4
42.5°	146.8	159.8	212.4	156.8	141.8
45°	113.7	121.7	142.8	116.2	108.2
47.5°	88.7	92.2	97.7	88.2	83.7
50°	68.6	68.6	64.6	66.1	64.1
52.5°	53.1	51.1	43.6	48.1	49.1
55°	41.6	38.1	30.1	36.1	38.6
57.5°	31.6	28.1	21.5	26.6	29.1
60°	24.5	21.0	16.0	20.0	22.5
62.5°	19.0	16.0	12.5	15.0	17.0
65°	14.5	12.0	10.0	11.5	13.0
67.5°	11.0	9.0	7.5	8.5	10.0
70°	7.5	7.0	6.0	6.5	7.0
72.5°	5.5	5.0	4.5	4.5	5.0
75°	4.0	3.5	3.5	3.5	3.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.0	1.0	1.0	1.0	1.0
85°	0.5	0.5	1.0	0.5	0.5
87.5°	0.5	0.5	0.5	0.5	0.5
90°	0.0	0.0	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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77.5°	2.5	2.5	2.5	2.5	2.5
80°	2.0	2.0	1.5	1.5	1.5

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Scaled Data Report



(END OF REPORT)