

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: P838569

Luminaire Tested: HCSQ635D010-HM63040940-61SQC

Issue Date: 5/21/2024



**Test Information**

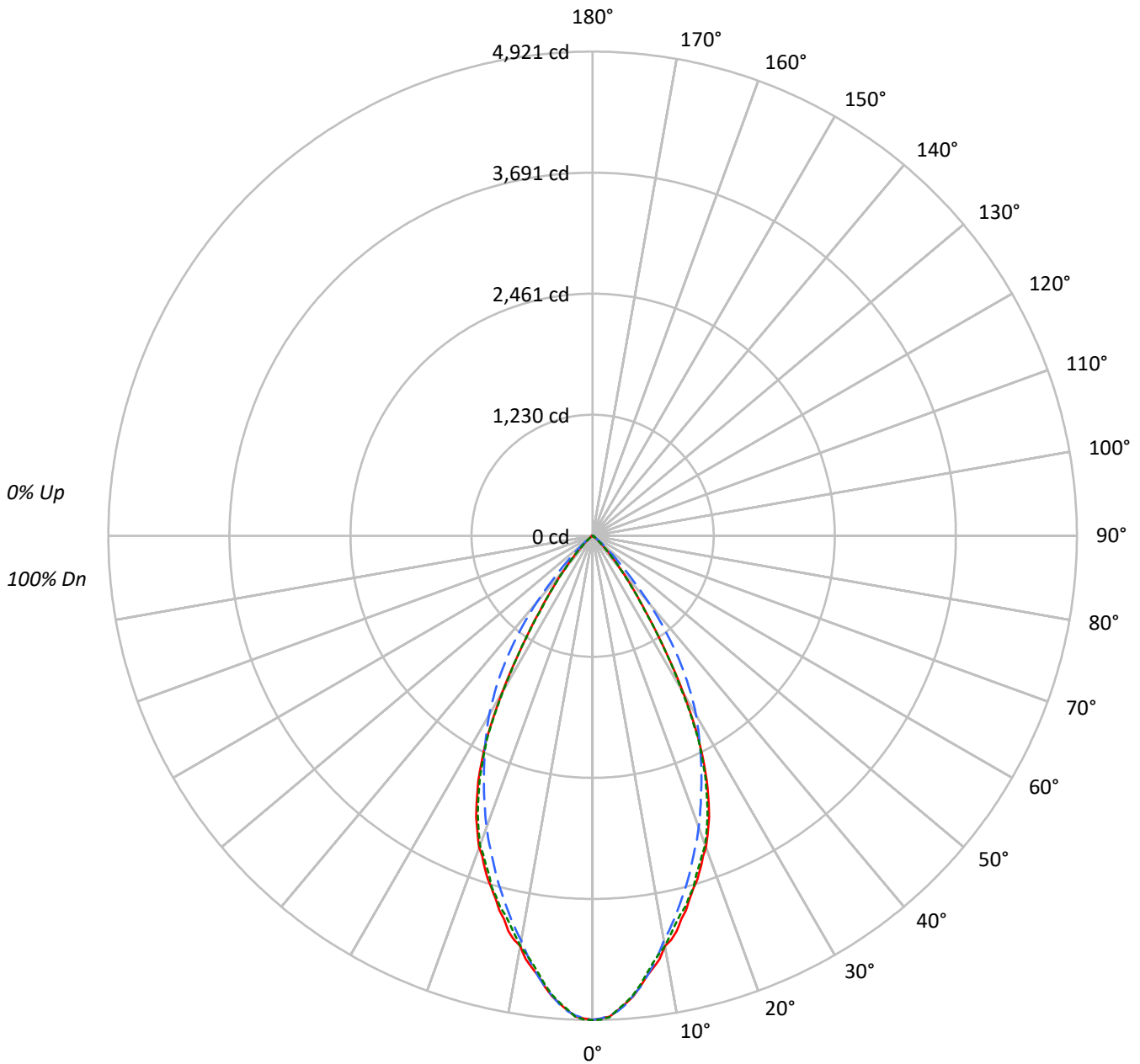
Test Method: LM-79-2019  
Report Number: P838569  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040940-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3686.1 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34  
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

TEST NUMBER: P838569  
CATALOG NUMBER: HCSQ635D010-HM63040940-61SQC

### Luminous Intensity Polar Plot





TEST NUMBER: P838569

CATALOG NUMBER: HCSQ635D010-HM63040940-61SQC

**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																			
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

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

	0°	45°	90°
0°	211886	211886	211886
5°	203247	202893	202607
10°	185119	182600	184974
15°	170127	163900	169102
20°	154391	144449	153337
25°	130482	124159	128686
30°	91364	104519	89808
35°	49071	80177	48120
40°	24297	49612	24112
45°	10607	20916	10406
50°	3416	7596	3416
55°	1727	2470	1606
60°	1128	1128	1128
65°	835	835	835
70°	617	617	617
75°	549	549	549
80°	397	397	397
85°	790	790	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 20916 cd/sqm



TEST NUMBER: P838569  
 CATALOG NUMBER: HCSQ635D010-HM63040940-61SQC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	432.1	11.7
10°-20°	1043.5	28.3
20°-30°	1205.4	32.7
30°-40°	752.8	20.4
40°-50°	209.1	5.7
50°-60°	29.3	0.8
60°-70°	8.6	0.2
70°-80°	3.7	0.1
80°-90°	1.5	0.0
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°	2681.1	72.7
0°-40°	3433.9	93.2
0°-60°	3672.3	99.6
0°-90°	3686.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3686.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4921	4921	4921	4921	4921	
5°	4703	4690	4694	4688	4688	433
15°	3817	3744	3677	3734	3794	1069
25°	2747	2666	2614	2664	2709	1227
35°	934	1152	1525	1139	916	620
45°	174	222	344	220	171	151
55°	23	23	33	23	21	23
65°	8	8	8	8	8	9
75°	3	3	3	3	3	3
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



TEST NUMBER: P838569

CATALOG NUMBER: HCSQ635D010-HM63040940-61SQC

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4921.2	4921.2	4921.2	4921.2	4921.2
1°	4906.4	4906.4	4906.4	4919.6	4919.6
2°	4891.6	4888.4	4880.1	4890.0	4894.9
3°	4830.8	4837.4	4840.7	4835.8	4824.3
4°	4768.4	4761.8	4779.9	4768.4	4758.5
5°	4702.6	4689.5	4694.4	4687.8	4687.8
6°	4610.6	4627.0	4613.9	4602.4	4595.8
7°	4510.3	4523.5	4515.2	4498.8	4487.3
8°	4431.4	4423.2	4410.0	4406.8	4387.0
9°	4355.8	4326.2	4296.6	4301.6	4306.5
10°	4234.2	4237.5	4176.6	4222.7	4230.9
11°	4183.2	4165.1	4084.6	4122.4	4135.5
12°	4109.2	4051.7	3982.7	4013.9	4038.6
13°	4002.4	3943.2	3880.8	3928.4	3953.1
14°	3921.9	3854.5	3775.6	3836.4	3887.3
15°	3816.7	3744.3	3677.0	3734.5	3793.7
16°	3724.6	3640.8	3573.4	3629.3	3718.0
17°	3644.1	3540.5	3458.3	3517.5	3603.0
18°	3550.4	3430.4	3354.8	3417.2	3514.2
19°	3446.8	3325.2	3257.8	3308.8	3420.5
20°	3369.6	3233.2	3152.6	3201.9	3346.6
22.5°	3093.4	2950.4	2876.5	2935.6	3050.7
25°	2746.6	2666.1	2613.5	2664.4	2708.8
27.5°	2335.7	2335.7	2353.8	2332.4	2319.3
30°	1837.7	1970.8	2102.3	1964.2	1806.4
32.5°	1341.3	1554.9	1819.6	1582.9	1339.6
35°	933.6	1152.2	1525.4	1139.1	915.5
37.5°	649.3	793.9	1203.2	802.1	641.0
40°	432.3	532.6	882.7	542.4	429.0
42.5°	282.7	351.8	570.4	353.4	276.1
45°	174.2	221.9	343.5	220.3	170.9
47.5°	101.9	131.5	200.5	133.1	100.3
50°	51.0	77.3	113.4	75.6	51.0
52.5°	29.6	41.1	62.5	39.4	29.6
55°	23.0	23.0	32.9	23.0	21.4
57.5°	18.1	18.1	18.1	18.1	16.4
60°	13.1	14.8	13.1	13.1	13.1
62.5°	11.5	11.5	9.9	11.5	9.9
65°	8.2	8.2	8.2	8.2	8.2
67.5°	6.6	6.6	6.6	6.6	6.6
70°	4.9	4.9	4.9	4.9	4.9
72.5°	3.3	4.9	3.3	4.9	4.9
75°	3.3	3.3	3.3	3.3	3.3



TEST NUMBER: P838569

CATALOG NUMBER: HCSQ635D010-HM63040940-61SQC

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	1.6
87.5°	1.6	1.6	1.6	1.6	1.6
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



Report Generated By 670245859 / DESKTOP-T8S5UU9



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





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

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



77.5°	3.3	3.3	3.3	3.3	1.6
80°	1.6	1.6	1.6	1.6	1.6

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)