

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: P838450

Luminaire Tested: HCSQ620D010-HM60525940-61SQH

Issue Date: 5/21/2024

**Test Information**

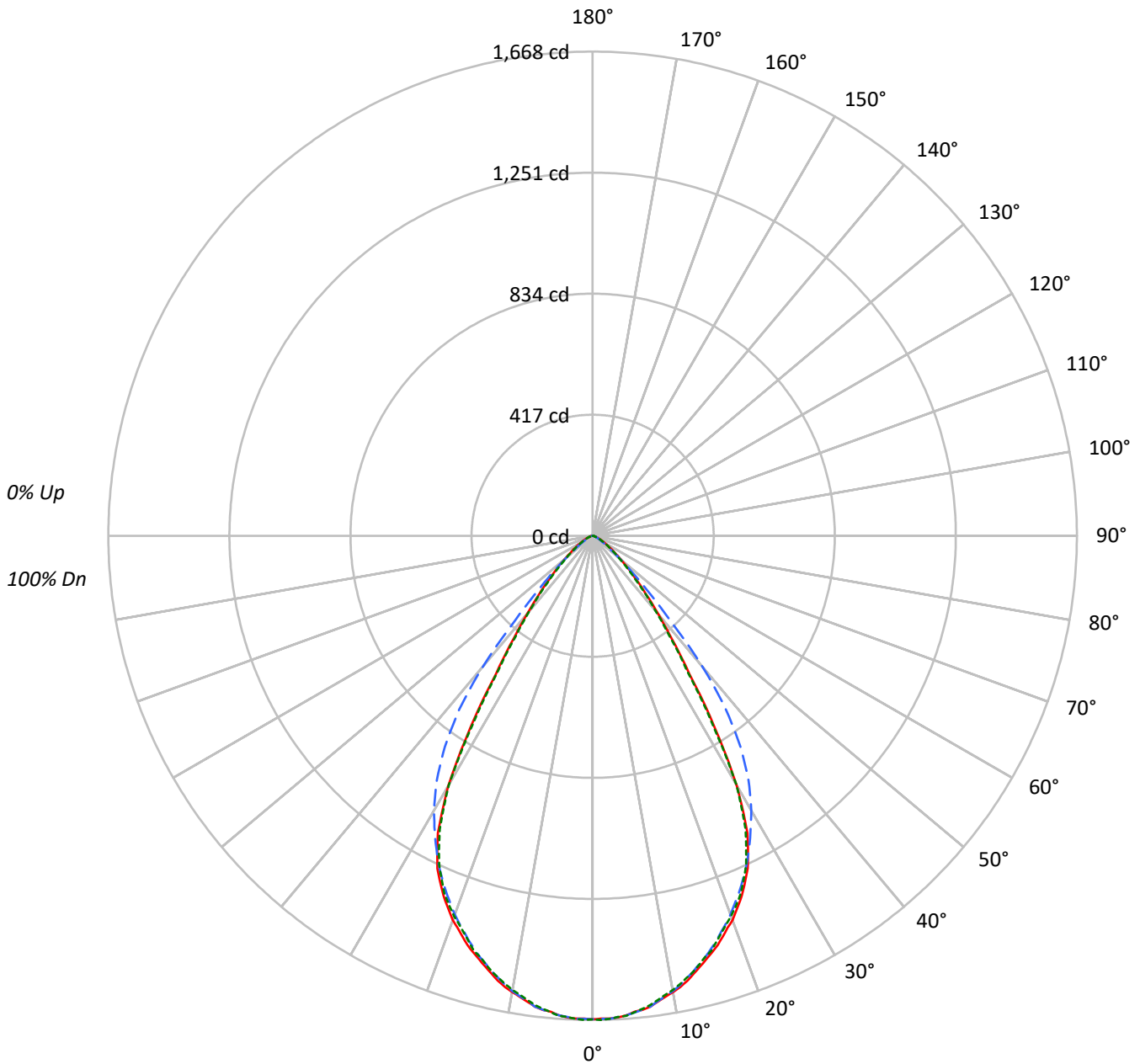
Test Method: LM-79-2019  
Report Number: P838450  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525940-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1873.3 lumens  
Efficiency: N/A  
Efficacy: 93.7 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): 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

TEST NUMBER: P838450  
CATALOG NUMBER: HCSQ620D010-HM60525940-61SQH

### Luminous Intensity Polar Plot





TEST NUMBER: P838450

CATALOG NUMBER: HCSQ620D010-HM60525940-61SQH

**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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94					92				
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86					85				
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79					78				
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73					71				
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67					66				
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62					61				
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58					56				
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54					52				
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50					48				
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47					45				

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

	0°	45°	90°
0°	71714	71714	71714
5°	71149	71270	71227
10°	69790	69628	69466
15°	67325	66955	66915
20°	64550	63620	63913
25°	60082	59554	59421
30°	49373	54330	49234
35°	30491	46664	29765
40°	19576	33077	18902
45°	12769	16032	12148
50°	8480	7984	7917
55°	5758	4159	5337
60°	3901	2549	3582
65°	2730	1885	2445
70°	1750	1397	1624
75°	1231	1081	1081
80°	917	694	694
85°	445	889	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 16032 cd/sqm



TEST NUMBER: P838450

CATALOG NUMBER: HCSQ620D010-HM60525940-61SQH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.6	8.3
10°-20°	422.2	22.5
20°-30°	569.9	30.4
30°-40°	444.8	23.7
40°-50°	186.3	9.9
50°-60°	63.2	3.4
60°-70°	22.5	1.2
70°-80°	7.3	0.4
80°-90°	1.5	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°	1147.7	61.3
0°-40°	1592.4	85.0
0°-60°	1841.9	98.3
0°-90°	1873.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1873.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1666	1666	1666	1666	1666	
5°	1646	1648	1649	1646	1648	156
15°	1510	1507	1502	1500	1501	425
25°	1265	1259	1254	1254	1251	569
35°	580	681	888	680	566	382
45°	210	224	263	214	200	168
55°	77	70	55	66	71	71
65°	27	22	18	21	24	28
75°	7	6	6	6	6	8
85°	1	1	2	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P838450

CATALOG NUMBER: HCSQ620D010-HM60525940-61SQH

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1665.6	1665.6	1665.6	1665.6	1665.6
1°	1663.8	1666.5	1664.7	1665.6	1668.4
2°	1663.8	1663.8	1665.6	1664.7	1665.6
3°	1661.9	1661.9	1660.1	1660.1	1660.1
4°	1656.4	1656.4	1656.4	1654.5	1658.2
5°	1646.2	1648.0	1649.0	1646.2	1648.0
6°	1642.5	1643.4	1641.6	1640.7	1638.8
7°	1634.2	1631.4	1634.2	1627.7	1628.6
8°	1620.3	1620.3	1618.5	1616.6	1614.8
9°	1607.4	1607.4	1605.6	1602.8	1600.9
10°	1596.3	1593.5	1592.6	1589.8	1588.9
11°	1583.4	1577.8	1576.9	1574.1	1574.1
12°	1567.7	1564.9	1558.4	1557.5	1557.5
13°	1548.3	1545.5	1540.9	1537.2	1540.9
14°	1529.8	1528.0	1519.6	1522.4	1521.5
15°	1510.4	1506.7	1502.1	1500.2	1501.2
16°	1492.9	1486.4	1479.9	1480.8	1486.4
17°	1474.4	1465.1	1458.7	1457.7	1460.5
18°	1451.3	1443.9	1433.7	1437.4	1437.4
19°	1428.2	1418.0	1411.6	1410.6	1414.3
20°	1408.8	1393.1	1388.5	1387.5	1394.9
22.5°	1342.3	1326.6	1322.9	1326.6	1334.0
25°	1264.7	1259.1	1253.6	1253.6	1250.8
27.5°	1154.7	1167.7	1174.1	1161.2	1140.0
30°	993.1	1047.6	1092.8	1041.1	990.3
32.5°	782.5	895.2	999.5	892.4	764.0
35°	580.1	680.8	887.8	679.9	566.3
37.5°	447.1	511.8	754.7	503.5	434.2
40°	348.3	386.1	588.5	381.5	336.3
42.5°	270.7	294.7	391.7	289.1	261.4
45°	209.7	224.5	263.3	214.3	199.5
47.5°	163.5	170.0	180.1	162.6	154.3
50°	126.6	126.6	119.2	121.9	118.2
52.5°	97.9	94.2	80.4	88.7	90.5
55°	76.7	70.2	55.4	66.5	71.1
57.5°	58.2	51.7	39.7	49.0	53.6
60°	45.3	38.8	29.6	37.0	41.6
62.5°	35.1	29.6	23.1	27.7	31.4
65°	26.8	22.2	18.5	21.2	24.0
67.5°	20.3	16.6	13.9	15.7	18.5
70°	13.9	12.9	11.1	12.0	12.9
72.5°	10.2	9.2	8.3	8.3	9.2
75°	7.4	6.5	6.5	6.5	6.5



TEST NUMBER: P838450

CATALOG NUMBER: HCSQ620D010-HM60525940-61SQH

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.8	1.8	1.8	1.8	1.8
85°	0.9	0.9	1.8	0.9	0.9
87.5°	0.9	0.9	0.9	0.9	0.9
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





77.5°	4.6	4.6	4.6	4.6	4.6
80°	3.7	3.7	2.8	2.8	2.8

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

Scaled Data Report



(END OF REPORT)