

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: P837650

Luminaire Tested: HCSQ455D010-HM44560840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837650
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ455D010-HM44560840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

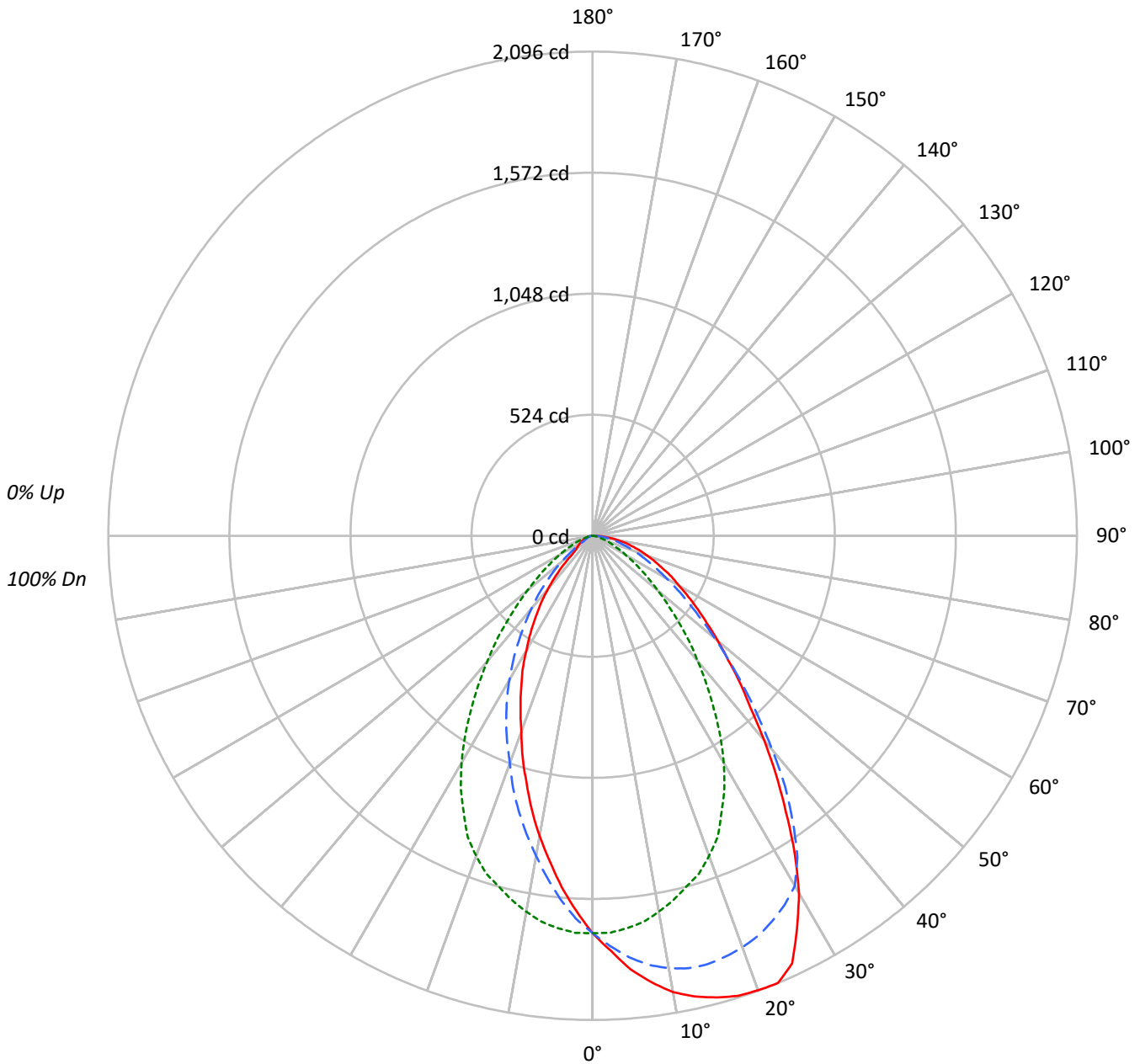
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2782.6 lumens
Efficiency: N/A
Efficacy: 51.5 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
Input Voltage (V): NR
Input Current (A_{in}): 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69				
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62				
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55				
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50				
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45				
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42				
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38				
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	166655	166655	166655	166655	166655
5°	183191	178202	165862	153765	148542
10°	197310	186991	162507	138495	129858
15°	207526	192602	157600	123832	110864
20°	215835	195464	151938	107917	93072
25°	218313	196667	141106	94683	78244
30°	199808	195714	126930	80518	64142
35°	172286	178625	108211	66085	50794
40°	145962	152753	89484	52153	37951
45°	123686	126700	71543	38785	24400
50°	106643	104081	55537	26103	14709
55°	93957	85715	42444	14424	13191
60°	83681	71862	31678	8041	11819
65°	76631	61524	23496	7266	10636
70°	71179	53222	17278	6911	10367
75°	66662	46563	11865	6400	9133
80°	63989	40837	8145	6806	8145
85°	62356	35235	5446	5446	5446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 128700 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.3	5.8
10°-20°	444.1	16.0
20°-30°	620.9	22.3
30°-40°	607.0	21.8
40°-50°	440.4	15.8
50°-60°	265.5	9.5
60°-70°	149.3	5.4
70°-80°	73.9	2.7
80°-90°	20.2	0.7
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°	1226.3	44.1
0°-40°	1833.3	65.9
0°-60°	2539.2	91.3
0°-90°	2782.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2782.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1720	1720	1720	1720	1720	
5°	1884	1832	1706	1581	1528	183
15°	2069	1920	1571	1235	1105	586
25°	2042	1840	1320	886	732	921
35°	1457	1510	915	559	430	912
45°	903	925	522	283	178	700
55°	556	508	251	85	78	500
65°	334	268	102	32	46	335
75°	178	124	32	17	24	192
85°	56	32	5	5	5	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1720.3	1720.3	1720.3	1720.3	1720.3	1720.3	1720.3	1720.3	1720.3
2.5°	1798.4	1793.5	1778.8	1749.6	1720.3	1686.1	1659.3	1639.8	1625.1
5°	1883.8	1874.0	1832.5	1771.5	1705.6	1639.8	1581.2	1547.0	1527.5
7.5°	1949.7	1932.6	1874.0	1788.6	1686.1	1586.1	1495.8	1442.1	1420.1
10°	2005.8	1976.5	1900.9	1786.2	1652.0	1520.2	1407.9	1344.5	1320.1
12.5°	2042.4	2010.7	1917.9	1783.7	1615.4	1454.3	1322.5	1239.6	1215.2
15°	2069.2	2030.2	1920.4	1764.2	1571.4	1386.0	1234.7	1137.1	1105.4
17.5°	2088.7	2035.1	1910.6	1742.2	1532.4	1315.2	1144.4	1039.5	1007.8
20°	2093.6	2035.1	1896.0	1710.5	1473.8	1244.5	1046.8	941.9	902.8
22.5°	2096.1	2027.7	1874.0	1671.5	1412.8	1163.9	966.3	856.5	815.0
25°	2042.4	2003.3	1839.9	1605.6	1320.1	1076.1	885.8	766.2	732.0
27.5°	1915.5	1913.1	1800.8	1517.8	1234.7	980.9	802.8	688.1	656.4
30°	1786.2	1788.6	1749.6	1420.1	1134.7	890.6	719.8	607.6	573.4
32.5°	1627.6	1652.0	1649.5	1310.3	1027.3	805.2	639.3	534.4	500.2
35°	1456.8	1500.7	1510.4	1185.9	915.0	707.6	558.8	463.6	429.5
37.5°	1303.0	1346.9	1368.9	1076.1	810.1	622.2	483.1	400.2	366.0
40°	1154.2	1190.8	1207.9	949.2	707.6	534.4	412.4	334.3	300.1
42.5°	1010.2	1063.9	1059.0	841.8	617.4	463.6	348.9	270.9	236.7
45°	902.8	939.4	924.8	729.6	522.2	390.4	283.1	209.9	178.1
47.5°	795.5	822.3	800.4	634.4	441.7	322.1	229.4	153.7	119.6
50°	707.6	719.8	690.6	539.3	368.5	263.5	173.2	102.5	97.6
52.5°	624.7	632.0	590.5	458.7	305.0	212.3	126.9	80.5	85.4
55°	556.3	553.9	507.5	388.0	251.3	163.5	85.4	73.2	78.1
57.5°	490.5	483.1	436.8	322.1	205.0	126.9	51.2	63.4	68.3
60°	431.9	424.6	370.9	266.0	163.5	95.2	41.5	56.1	61.0
62.5°	385.5	368.5	314.8	219.6	131.8	68.3	36.6	48.8	53.7
65°	334.3	319.7	268.4	178.1	102.5	48.8	31.7	41.5	46.4
67.5°	292.8	275.7	226.9	146.4	83.0	34.2	29.3	36.6	41.5
70°	251.3	236.7	187.9	117.1	61.0	22.0	24.4	31.7	36.6
72.5°	217.2	200.1	156.2	92.7	46.4	17.1	22.0	26.8	29.3
75°	178.1	163.5	124.4	70.8	31.7	14.6	17.1	22.0	24.4
77.5°	148.8	134.2	97.6	53.7	22.0	12.2	14.6	19.5	19.5
80°	114.7	102.5	73.2	36.6	14.6	7.3	12.2	14.6	14.6
82.5°	83.0	73.2	51.2	24.4	7.3	7.3	7.3	9.8	9.8
85°	56.1	48.8	31.7	14.6	4.9	4.9	4.9	4.9	4.9
87.5°	31.7	24.4	14.6	4.9	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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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