

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: P837565

Luminaire Tested: HCSQ445D010-HM44560835-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837565
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: HCSQ445D010-HM44560835-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

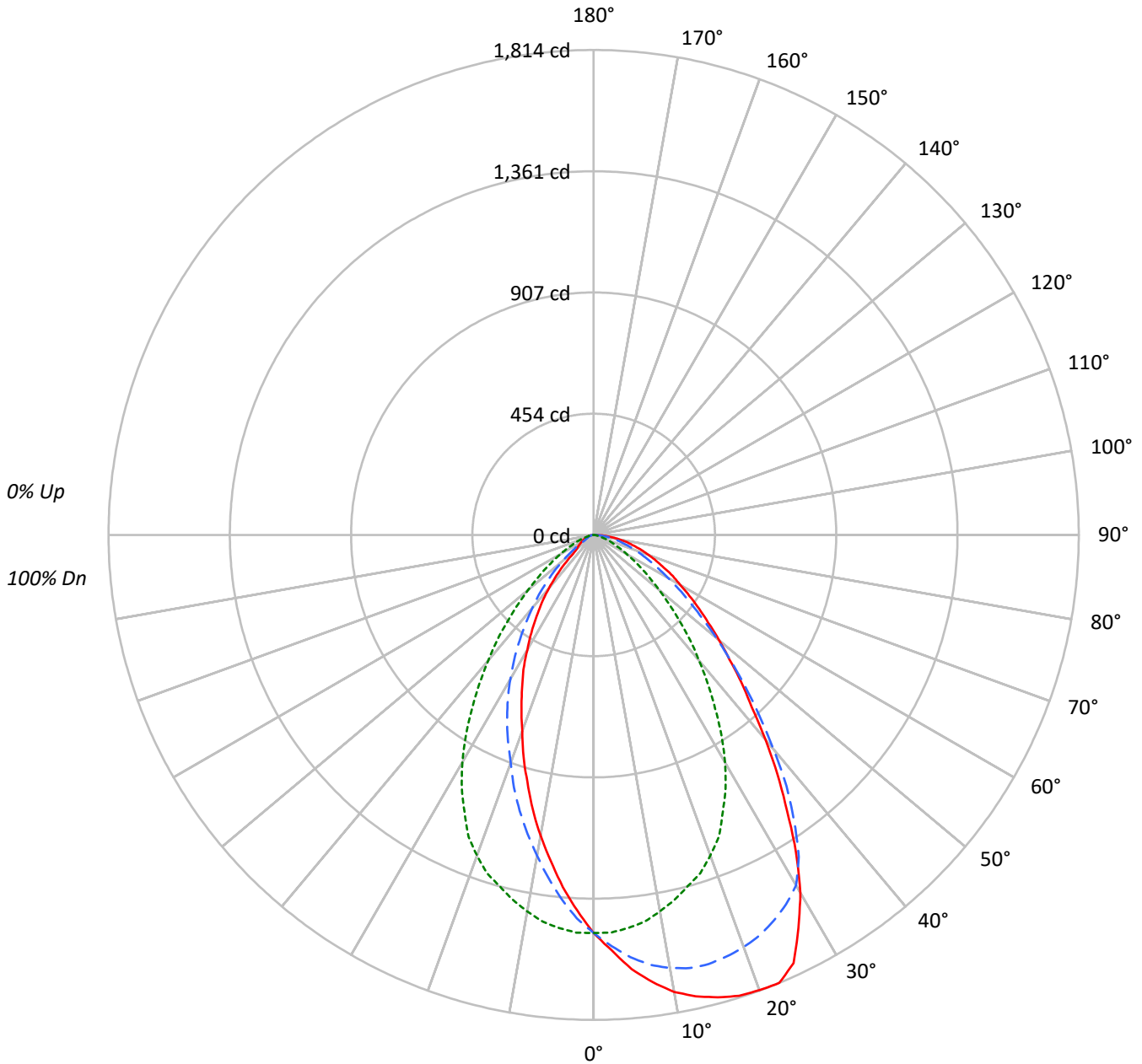
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2408.1 lumens
Efficiency: N/A
Efficacy: 52.5 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): 45.9
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°	144228	144228	144228	144228	144228
5°	158530	154222	143544	133071	128549
10°	170750	161818	140630	119864	112378
15°	179594	166677	136388	107163	95940
20°	186783	169154	131495	93392	80546
25°	188928	170191	122111	81942	67715
30°	172916	169370	109837	69690	55517
35°	149094	154593	93653	57192	43958
40°	126310	132191	77445	45134	32842
45°	107040	109643	61911	33566	21126
50°	92296	90065	48062	22592	12735
55°	81324	74180	36735	12481	11417
60°	72424	62194	27416	6956	10230
65°	66315	53249	20332	6304	9192
70°	61606	46056	14955	5976	8979
75°	57717	40312	10293	5540	7898
80°	55398	35370	7085	5914	7085
85°	54020	30567	4668	4668	4668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 111383 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.6	5.8
10°-20°	384.3	16.0
20°-30°	537.4	22.3
30°-40°	525.3	21.8
40°-50°	381.1	15.8
50°-60°	229.8	9.5
60°-70°	129.2	5.4
70°-80°	64.0	2.7
80°-90°	17.5	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°	1061.3	44.1
0°-40°	1586.6	65.9
0°-60°	2197.5	91.3
0°-90°	2408.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2408.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1489	1489	1489	1489	1489	
5°	1630	1586	1476	1368	1322	159
15°	1791	1662	1360	1068	957	507
25°	1768	1592	1142	767	634	797
35°	1261	1307	792	484	372	789
45°	781	800	452	245	154	606
55°	482	439	218	74	68	433
65°	289	232	89	28	40	290
75°	154	108	28	15	21	166
85°	49	28	4	4	4	54
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°	1488.8	1488.8	1488.8	1488.8	1488.8	1488.8	1488.8	1488.8	1488.8
2.5°	1556.3	1552.1	1539.4	1514.1	1488.8	1459.2	1436.0	1419.1	1406.4
5°	1630.2	1621.8	1585.9	1533.1	1476.1	1419.1	1368.4	1338.8	1321.9
7.5°	1687.3	1672.5	1621.8	1547.9	1459.2	1372.6	1294.5	1248.0	1229.0
10°	1735.8	1710.5	1645.0	1545.8	1429.6	1315.6	1218.5	1163.6	1142.4
12.5°	1767.5	1740.1	1659.8	1543.7	1398.0	1258.6	1144.5	1072.8	1051.6
15°	1790.7	1756.9	1661.9	1526.8	1359.9	1199.5	1068.5	984.1	956.6
17.5°	1807.6	1761.2	1653.5	1507.8	1326.2	1138.2	990.4	899.6	872.1
20°	1811.8	1761.2	1640.8	1480.3	1275.5	1077.0	905.9	815.1	781.3
22.5°	1814.0	1754.8	1621.8	1446.5	1222.7	1007.3	836.2	741.2	705.3
25°	1767.5	1733.7	1592.2	1389.5	1142.4	931.3	766.6	663.1	633.5
27.5°	1657.7	1655.6	1558.4	1313.5	1068.5	848.9	694.8	595.5	568.1
30°	1545.8	1547.9	1514.1	1229.0	981.9	770.8	623.0	525.8	496.3
32.5°	1408.5	1429.6	1427.5	1134.0	889.0	696.9	553.3	462.5	432.9
35°	1260.7	1298.7	1307.2	1026.3	791.9	612.4	483.6	401.2	371.7
37.5°	1127.7	1165.7	1184.7	931.3	701.1	538.5	418.1	346.3	316.8
40°	998.8	1030.5	1045.3	821.5	612.4	462.5	356.9	289.3	259.7
42.5°	874.2	920.7	916.5	728.5	534.3	401.2	302.0	234.4	204.8
45°	781.3	813.0	800.3	631.4	451.9	337.9	245.0	181.6	154.2
47.5°	688.4	711.6	692.6	549.0	382.2	278.7	198.5	133.0	103.5
50°	612.4	623.0	597.6	466.7	318.9	228.1	149.9	88.7	84.5
52.5°	540.6	546.9	511.0	397.0	264.0	183.7	109.8	69.7	73.9
55°	481.5	479.4	439.2	335.8	217.5	141.5	73.9	63.4	67.6
57.5°	424.5	418.1	378.0	278.7	177.4	109.8	44.3	54.9	59.1
60°	373.8	367.4	321.0	230.2	141.5	82.4	35.9	48.6	52.8
62.5°	333.7	318.9	272.4	190.1	114.0	59.1	31.7	42.2	46.5
65°	289.3	276.6	232.3	154.2	88.7	42.2	27.5	35.9	40.1
67.5°	253.4	238.6	196.4	126.7	71.8	29.6	25.3	31.7	35.9
70°	217.5	204.8	162.6	101.4	52.8	19.0	21.1	27.5	31.7
72.5°	187.9	173.2	135.1	80.2	40.1	14.8	19.0	23.2	25.3
75°	154.2	141.5	107.7	61.2	27.5	12.7	14.8	19.0	21.1
77.5°	128.8	116.1	84.5	46.5	19.0	10.6	12.7	16.9	16.9
80°	99.3	88.7	63.4	31.7	12.7	6.3	10.6	12.7	12.7
82.5°	71.8	63.4	44.3	21.1	6.3	6.3	6.3	8.4	8.4
85°	48.6	42.2	27.5	12.7	4.2	4.2	4.2	4.2	4.2
87.5°	27.5	21.1	12.7	4.2	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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