

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



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: P837555

Luminaire Tested: HCSQ445D010-HM44560827-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837555
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-HM44560827-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

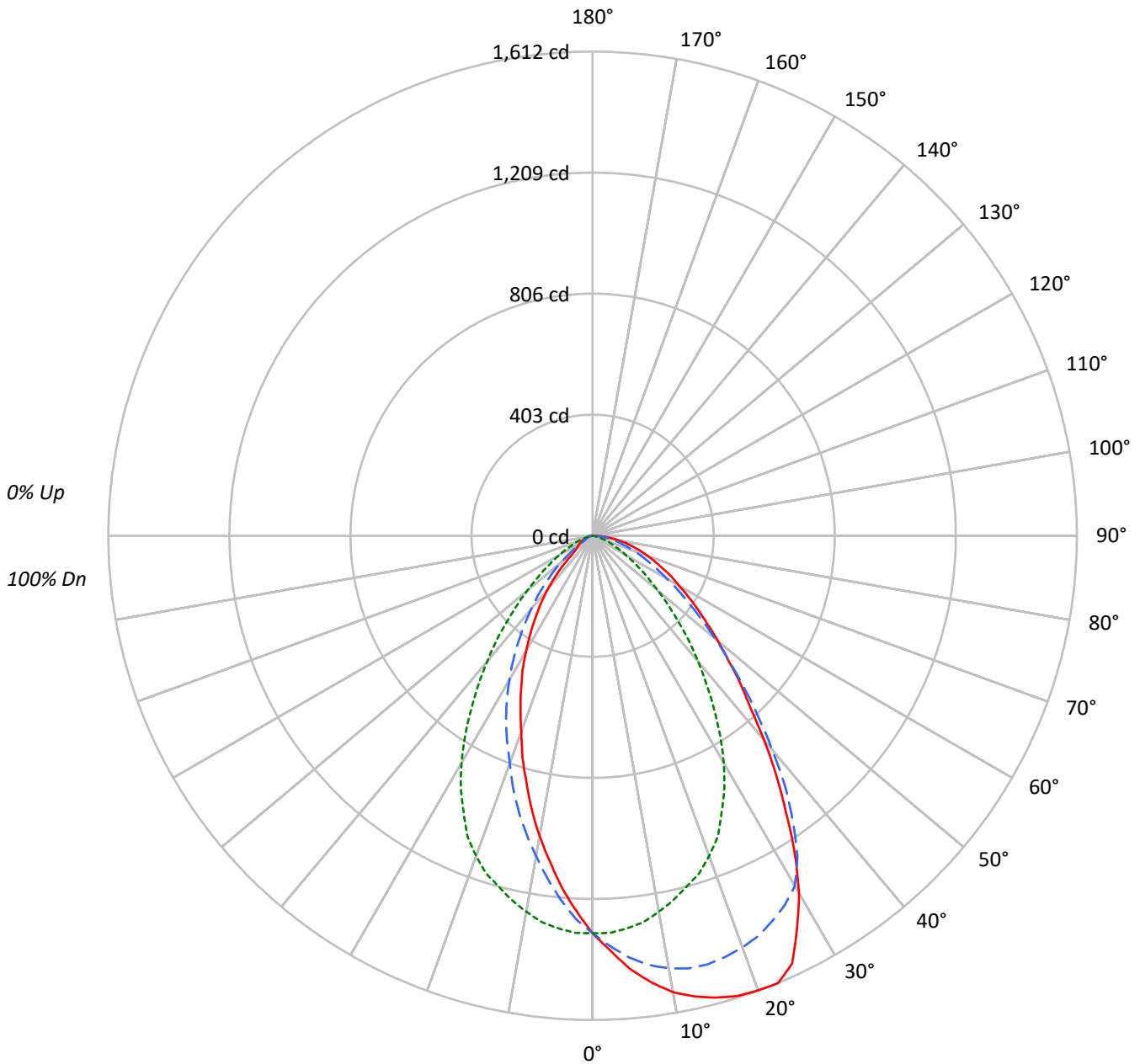
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2140.5 lumens
Efficiency: N/A
Efficacy: 46.6 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	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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89					89			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78					78			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69					69			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55					55			
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45					45			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42					42			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35					35			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	128195	128195	128195	128195	128195
5°	140918	137087	127596	118280	114273
10°	151785	143836	125008	106544	99895
15°	159646	148163	121234	95258	85279
20°	166031	150361	116886	83021	71598
25°	167935	151282	108547	72835	60190
30°	153699	150555	97633	61938	49342
35°	132526	137410	83245	50841	39074
40°	112286	117508	68846	40114	29200
45°	95148	97464	55034	29825	18769
50°	82047	80058	42712	20090	11318
55°	72288	65937	32648	11097	10151
60°	64364	55277	24374	6181	9087
65°	58957	47335	18063	5593	8183
70°	54751	40929	13284	5325	7988
75°	51279	35820	9133	4903	7037
80°	49205	31409	6304	5244	6304
85°	48018	27121	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 99012 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.1	5.8
10°-20°	341.6	16.0
20°-30°	477.7	22.3
30°-40°	466.9	21.8
40°-50°	338.8	15.8
50°-60°	204.2	9.5
60°-70°	114.8	5.4
70°-80°	56.9	2.7
80°-90°	15.6	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°	943.4	44.1
0°-40°	1410.3	65.9
0°-60°	1953.3	91.3
0°-90°	2140.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2140.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1323	1323	1323	1323	1323	
5°	1449	1410	1312	1216	1175	141
15°	1592	1477	1209	950	850	451
25°	1571	1415	1016	681	563	708
35°	1121	1162	704	430	330	702
45°	694	711	402	218	137	538
55°	428	390	193	66	60	385
65°	257	206	79	24	36	258
75°	137	96	24	13	19	148
85°	43	24	4	4	4	48
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°	1323.3	1323.3	1323.3	1323.3	1323.3	1323.3	1323.3	1323.3	1323.3
2.5°	1383.4	1379.7	1368.4	1345.9	1323.3	1297.1	1276.4	1261.4	1250.1
5°	1449.1	1441.6	1409.7	1362.8	1312.1	1261.4	1216.3	1190.1	1175.1
7.5°	1499.8	1486.6	1441.6	1375.9	1297.1	1220.1	1150.6	1109.4	1092.5
10°	1543.0	1520.4	1462.2	1374.0	1270.8	1169.4	1083.1	1034.3	1015.5
12.5°	1571.1	1546.7	1475.4	1372.1	1242.6	1118.7	1017.4	953.6	934.8
15°	1591.8	1561.7	1477.3	1357.1	1208.8	1066.2	949.8	874.7	850.3
17.5°	1606.8	1565.5	1469.8	1340.2	1178.8	1011.7	880.3	799.6	775.2
20°	1610.5	1565.5	1458.5	1315.8	1133.8	957.3	805.3	724.6	694.5
22.5°	1612.4	1559.9	1441.6	1285.8	1086.8	895.4	743.3	658.9	626.9
25°	1571.1	1541.1	1415.3	1235.1	1015.5	827.8	681.4	589.4	563.1
27.5°	1473.5	1471.6	1385.3	1167.5	949.8	754.6	617.6	529.3	504.9
30°	1374.0	1375.9	1345.9	1092.5	872.8	685.1	553.7	467.4	441.1
32.5°	1252.0	1270.8	1268.9	1008.0	790.2	619.4	491.8	411.1	384.8
35°	1120.6	1154.4	1161.9	912.3	703.9	544.4	429.9	356.6	330.4
37.5°	1002.4	1036.1	1053.0	827.8	623.2	478.7	371.7	307.8	281.6
40°	887.9	916.0	929.2	730.2	544.4	411.1	317.2	257.2	230.9
42.5°	777.1	818.4	814.7	647.6	474.9	356.6	268.4	208.4	182.1
45°	694.5	722.7	711.4	561.2	401.7	300.3	217.7	161.4	137.0
47.5°	611.9	632.6	615.7	488.0	339.8	247.8	176.4	118.3	92.0
50°	544.4	553.7	531.2	414.8	283.4	202.7	133.3	78.8	75.1
52.5°	480.5	486.2	454.3	352.9	234.6	163.3	97.6	61.9	65.7
55°	428.0	426.1	390.4	298.5	193.3	125.8	65.7	56.3	60.1
57.5°	377.3	371.7	336.0	247.8	157.7	97.6	39.4	48.8	52.6
60°	332.2	326.6	285.3	204.6	125.8	73.2	31.9	43.2	46.9
62.5°	296.6	283.4	242.1	168.9	101.4	52.6	28.2	37.5	41.3
65°	257.2	245.9	206.5	137.0	78.8	37.5	24.4	31.9	35.7
67.5°	225.2	212.1	174.6	112.6	63.8	26.3	22.5	28.2	31.9
70°	193.3	182.1	144.5	90.1	46.9	16.9	18.8	24.4	28.2
72.5°	167.1	153.9	120.1	71.3	35.7	13.1	16.9	20.6	22.5
75°	137.0	125.8	95.7	54.4	24.4	11.3	13.1	16.9	18.8
77.5°	114.5	103.2	75.1	41.3	16.9	9.4	11.3	15.0	15.0
80°	88.2	78.8	56.3	28.2	11.3	5.6	9.4	11.3	11.3
82.5°	63.8	56.3	39.4	18.8	5.6	5.6	5.6	7.5	7.5
85°	43.2	37.5	24.4	11.3	3.8	3.8	3.8	3.8	3.8
87.5°	24.4	18.8	11.3	3.8	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

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Scaled Data Report



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Scaled Data Report





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

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