

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: P837540

Luminaire Tested: HCSQ440D010-HM43040930-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837540
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: HCSQ440D010-HM43040930-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

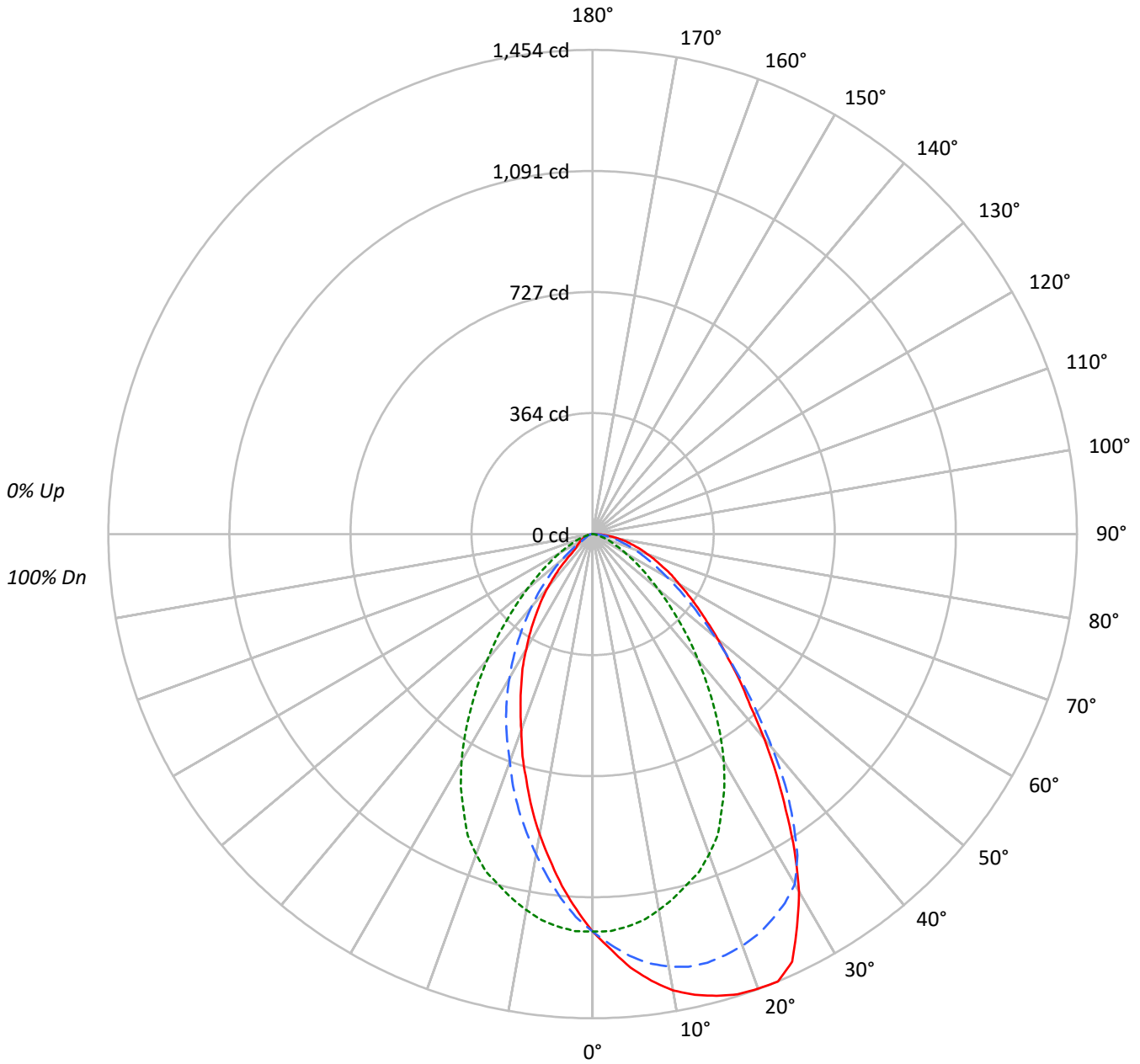
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1930.6 lumens
Efficiency: N/A
Efficacy: 47.1 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): 41
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°	115621	115621	115621	115621	115621
5°	127100	123638	115080	106678	103061
10°	136892	129730	112742	96088	90097
15°	143980	133630	109349	85911	76915
20°	149752	135608	105412	74876	64577
25°	151463	136445	97901	65684	54290
30°	138620	135789	88058	55864	44499
35°	119528	123928	75085	45851	35242
40°	101271	105975	62093	36181	26329
45°	85818	87901	49636	26907	16934
50°	73999	72206	38522	18116	10203
55°	65194	59469	29456	10016	9154
60°	58067	49852	21971	5580	8196
65°	53158	42682	16298	5043	7381
70°	49398	36935	11981	4787	7194
75°	46263	32302	8235	4454	6326
80°	44408	28340	5690	4742	5690
85°	43238	24453	3779	3779	3779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 89298 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	5.8
10°-20°	308.1	16.0
20°-30°	430.8	22.3
30°-40°	421.1	21.8
40°-50°	305.6	15.8
50°-60°	184.2	9.5
60°-70°	103.5	5.4
70°-80°	51.3	2.7
80°-90°	14.0	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°	850.8	44.1
0°-40°	1271.9	65.9
0°-60°	1761.7	91.3
0°-90°	1930.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1930.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1194	1194	1194	1194	1194	
5°	1307	1271	1183	1097	1060	127
15°	1436	1332	1090	857	767	407
25°	1417	1276	916	614	508	639
35°	1011	1048	635	388	298	633
45°	626	642	362	196	124	486
55°	386	352	174	59	54	347
65°	232	186	71	22	32	232
75°	124	86	22	12	17	133
85°	39	22	3	3	3	43
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°	1193.5	1193.5	1193.5	1193.5	1193.5	1193.5	1193.5	1193.5	1193.5
2.5°	1247.7	1244.3	1234.2	1213.9	1193.5	1169.8	1151.2	1137.7	1127.5
5°	1307.0	1300.2	1271.4	1229.1	1183.4	1137.7	1097.0	1073.3	1059.8
7.5°	1352.7	1340.8	1300.2	1240.9	1169.8	1100.4	1037.8	1000.5	985.3
10°	1391.6	1371.3	1318.8	1239.2	1146.1	1054.7	976.8	932.8	915.9
12.5°	1417.0	1395.0	1330.7	1237.6	1120.7	1009.0	917.6	860.0	843.1
15°	1435.6	1408.5	1332.4	1224.0	1090.3	961.6	856.6	788.9	766.9
17.5°	1449.2	1411.9	1325.6	1208.8	1063.2	912.5	794.0	721.2	699.2
20°	1452.6	1411.9	1315.4	1186.8	1022.5	863.4	726.3	653.5	626.4
22.5°	1454.3	1406.9	1300.2	1159.7	980.2	807.5	670.4	594.2	565.4
25°	1417.0	1389.9	1276.5	1114.0	915.9	746.6	614.5	531.6	507.9
27.5°	1329.0	1327.3	1249.4	1053.0	856.6	680.6	557.0	477.4	455.4
30°	1239.2	1240.9	1213.9	985.3	787.2	617.9	499.4	421.5	397.8
32.5°	1129.2	1146.1	1144.4	909.1	712.7	558.7	443.6	370.8	347.1
35°	1010.7	1041.2	1047.9	822.8	634.9	491.0	387.7	321.7	298.0
37.5°	904.0	934.5	949.8	746.6	562.1	431.7	335.2	277.6	253.9
40°	800.8	826.2	838.0	658.6	491.0	370.8	286.1	231.9	208.2
42.5°	700.9	738.1	734.7	584.1	428.3	321.7	242.1	187.9	164.2
45°	626.4	651.8	641.6	506.2	362.3	270.9	196.4	145.6	123.6
47.5°	551.9	570.5	555.3	440.2	306.4	223.5	159.1	106.7	83.0
50°	491.0	499.4	479.1	374.1	255.6	182.8	120.2	71.1	67.7
52.5°	433.4	438.5	409.7	318.3	211.6	147.3	88.0	55.9	59.3
55°	386.0	384.3	352.1	269.2	174.4	113.4	59.3	50.8	54.2
57.5°	340.3	335.2	303.0	223.5	142.2	88.0	35.6	44.0	47.4
60°	299.7	294.6	257.3	184.5	113.4	66.0	28.8	38.9	42.3
62.5°	267.5	255.6	218.4	152.4	91.4	47.4	25.4	33.9	37.2
65°	231.9	221.8	186.2	123.6	71.1	33.9	22.0	28.8	32.2
67.5°	203.2	191.3	157.4	101.6	57.6	23.7	20.3	25.4	28.8
70°	174.4	164.2	130.4	81.3	42.3	15.2	16.9	22.0	25.4
72.5°	150.7	138.8	108.3	64.3	32.2	11.9	15.2	18.6	20.3
75°	123.6	113.4	86.3	49.1	22.0	10.2	11.9	15.2	16.9
77.5°	103.3	93.1	67.7	37.2	15.2	8.5	10.2	13.5	13.5
80°	79.6	71.1	50.8	25.4	10.2	5.1	8.5	10.2	10.2
82.5°	57.6	50.8	35.6	16.9	5.1	5.1	5.1	6.8	6.8
85°	38.9	33.9	22.0	10.2	3.4	3.4	3.4	3.4	3.4
87.5°	22.0	16.9	10.2	3.4	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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