

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: P837535

Luminaire Tested: HCSQ440D010-HM43040927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837535
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-HM43040927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

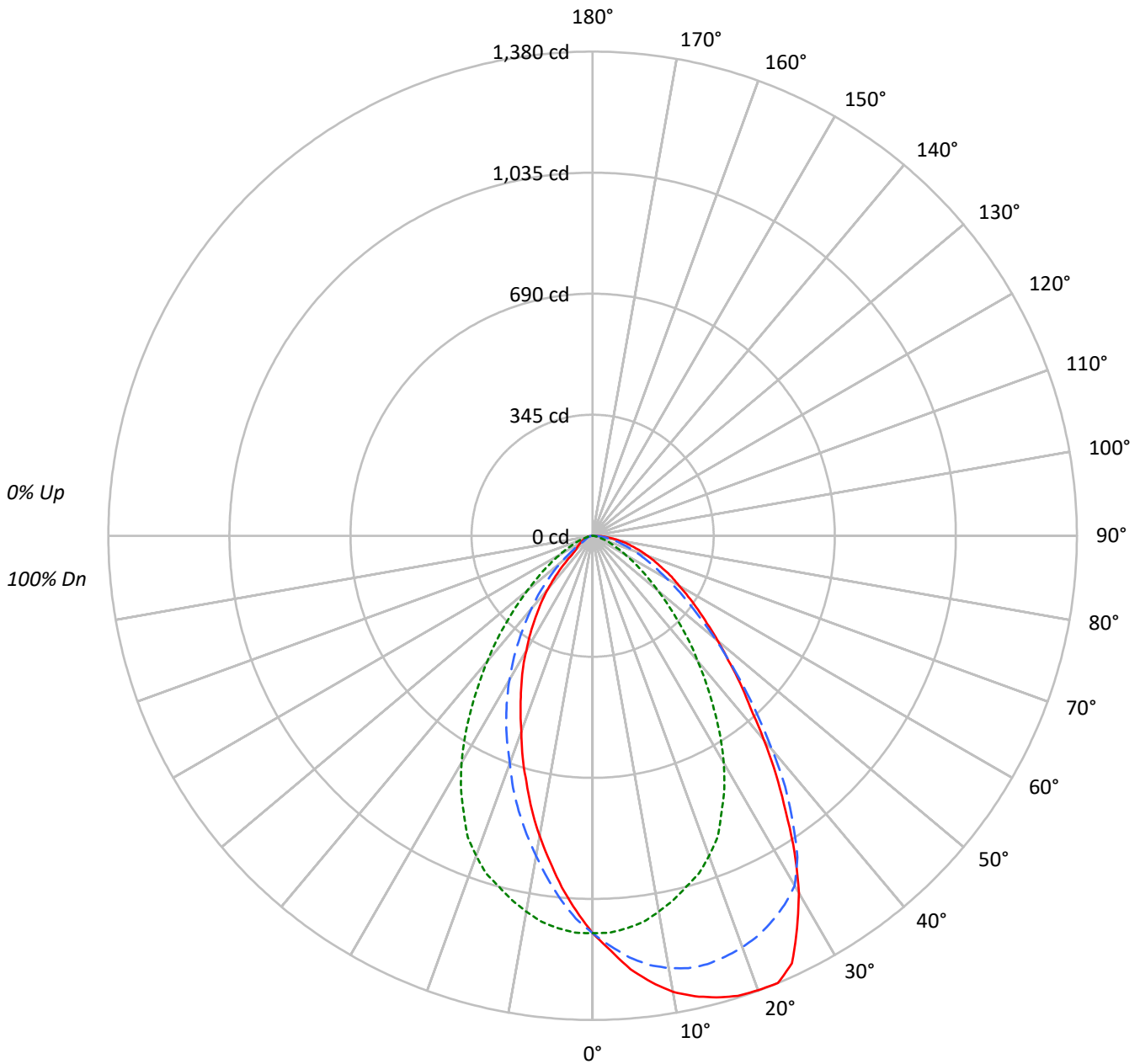
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1831.8 lumens
Efficiency: N/A
Efficacy: 44.7 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										
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°	109711	109711	109711	109711	109711
5°	120594	117317	109197	101223	97790
10°	129888	123100	106977	91179	85483
15°	136619	126790	103753	81518	72983
20°	142093	128680	100021	71041	61278
25°	143714	129465	92888	62328	51510
30°	131539	128843	83561	53011	42228
35°	113414	117589	71242	43509	33433
40°	96086	100562	58906	34334	24989
45°	81434	83407	47101	25524	16070
50°	70201	68513	36563	17196	9691
55°	61867	56429	27952	9492	8681
60°	55083	47314	20848	5289	7789
65°	50453	40504	15473	4791	6991
70°	46877	35037	11386	4560	6826
75°	43905	30655	7823	4192	6026
80°	42120	26890	5356	4463	5356
85°	41015	23231	3557	3557	3557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 84736 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	5.8
10°-20°	292.4	16.0
20°-30°	408.8	22.3
30°-40°	399.6	21.8
40°-50°	289.9	15.8
50°-60°	174.8	9.5
60°-70°	98.3	5.4
70°-80°	48.7	2.7
80°-90°	13.3	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°	807.3	44.1
0°-40°	1206.9	65.9
0°-60°	1671.6	91.3
0°-90°	1831.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1831.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1132	1132	1132	1132	1132	
5°	1240	1206	1123	1041	1006	121
15°	1362	1264	1034	813	728	386
25°	1344	1211	869	583	482	606
35°	959	994	602	368	283	600
45°	594	609	344	186	117	461
55°	366	334	166	56	51	329
65°	220	177	68	21	30	220
75°	117	82	21	11	16	126
85°	37	21	3	3	3	41
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°	1132.5	1132.5	1132.5	1132.5	1132.5	1132.5	1132.5	1132.5	1132.5
2.5°	1183.9	1180.7	1171.0	1151.8	1132.5	1110.0	1092.3	1079.5	1069.8
5°	1240.1	1233.7	1206.4	1166.2	1122.9	1079.5	1040.9	1018.4	1005.6
7.5°	1283.5	1272.2	1233.7	1177.5	1110.0	1044.1	984.7	949.4	934.9
10°	1320.4	1301.2	1251.4	1175.9	1087.5	1000.8	926.9	885.1	869.0
12.5°	1344.5	1323.7	1262.6	1174.3	1063.4	957.4	870.7	816.0	800.0
15°	1362.2	1336.5	1264.2	1161.4	1034.5	912.4	812.8	748.6	727.7
17.5°	1375.1	1339.7	1257.8	1146.9	1008.8	865.8	753.4	684.3	663.4
20°	1378.3	1339.7	1248.2	1126.1	970.2	819.2	689.1	620.1	594.4
22.5°	1379.9	1334.9	1233.7	1100.4	930.1	766.2	636.1	563.8	536.5
25°	1344.5	1318.8	1211.2	1057.0	869.0	708.4	583.1	504.4	481.9
27.5°	1261.0	1259.4	1185.5	999.2	812.8	645.8	528.5	453.0	432.1
30°	1175.9	1177.5	1151.8	934.9	747.0	586.3	473.9	400.0	377.5
32.5°	1071.5	1087.5	1085.9	862.6	676.3	530.1	420.9	351.8	329.3
35°	959.0	987.9	994.3	780.7	602.4	465.8	367.9	305.2	282.7
37.5°	857.8	886.7	901.2	708.4	533.3	409.6	318.1	263.4	241.0
40°	759.8	783.9	795.2	624.9	465.8	351.8	271.5	220.1	197.6
42.5°	665.0	700.4	697.2	554.2	406.4	305.2	229.7	178.3	155.8
45°	594.4	618.5	608.8	480.3	343.8	257.0	186.3	138.1	117.3
47.5°	523.7	541.3	526.9	417.7	290.8	212.0	151.0	101.2	78.7
50°	465.8	473.9	454.6	355.0	242.6	173.5	114.1	67.5	64.3
52.5°	411.2	416.1	388.7	302.0	200.8	139.8	83.5	53.0	56.2
55°	366.3	364.6	334.1	255.4	165.5	107.6	56.2	48.2	51.4
57.5°	322.9	318.1	287.5	212.0	134.9	83.5	33.7	41.8	45.0
60°	284.3	279.5	244.2	175.1	107.6	62.6	27.3	36.9	40.2
62.5°	253.8	242.6	207.2	144.6	86.7	45.0	24.1	32.1	35.3
65°	220.1	210.4	176.7	117.3	67.5	32.1	20.9	27.3	30.5
67.5°	192.8	181.5	149.4	96.4	54.6	22.5	19.3	24.1	27.3
70°	165.5	155.8	123.7	77.1	40.2	14.5	16.1	20.9	24.1
72.5°	143.0	131.7	102.8	61.0	30.5	11.2	14.5	17.7	19.3
75°	117.3	107.6	81.9	46.6	20.9	9.6	11.2	14.5	16.1
77.5°	98.0	88.4	64.3	35.3	14.5	8.0	9.6	12.9	12.9
80°	75.5	67.5	48.2	24.1	9.6	4.8	8.0	9.6	9.6
82.5°	54.6	48.2	33.7	16.1	4.8	4.8	4.8	6.4	6.4
85°	36.9	32.1	20.9	9.6	3.2	3.2	3.2	3.2	3.2
87.5°	20.9	16.1	9.6	3.2	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

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Scaled Data Report



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

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