

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: P837480

Luminaire Tested: HCSQ435D010-HM43040830-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837480
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: HCSQ435D010-HM43040830-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

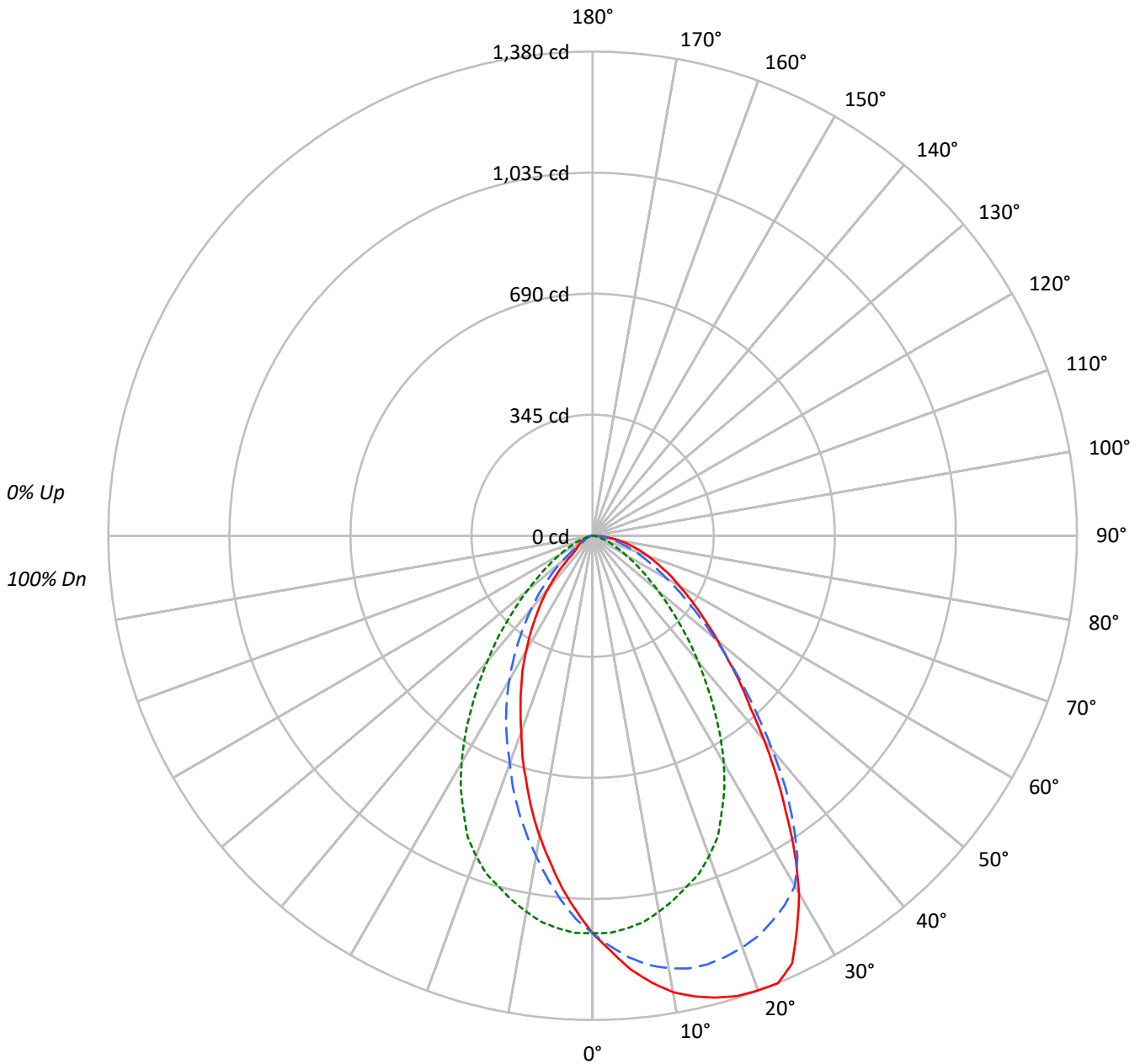
Lumens per Lamp: N/A
Luminaire Lumens: 1832.5 lumens
Efficiency: N/A
Efficacy: 53.9 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
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°	109750	109750	109750	109750	109750
5°	120643	117356	109236	101262	97819
10°	129937	123139	107017	91209	85523
15°	136669	126840	103793	81548	73003
20°	142144	128722	100062	71072	61299
25°	143767	129508	92930	62349	51532
30°	131583	128888	83583	53023	42239
35°	113450	117636	71265	43521	33445
40°	96124	100588	58931	34347	25002
45°	81462	83435	47115	25537	16070
50°	70232	68544	36563	17196	9691
55°	61884	56445	27952	9492	8681
60°	55103	47333	20867	5289	7789
65°	50476	40527	15473	4791	6991
70°	46877	35037	11386	4560	6826
75°	43905	30692	7823	4192	6026
80°	42120	26890	5356	4463	5356
85°	41126	23231	3557	3557	3557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 84763 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	5.8
10°-20°	292.5	16.0
20°-30°	408.9	22.3
30°-40°	399.7	21.8
40°-50°	290.0	15.8
50°-60°	174.9	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°	807.6	44.1
0°-40°	1207.3	65.9
0°-60°	1672.2	91.3
0°-90°	1832.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1133	1133	1133	1133	1133	
5°	1241	1207	1123	1041	1006	121
15°	1363	1265	1035	813	728	386
25°	1345	1212	869	583	482	606
35°	959	995	603	368	283	601
45°	595	609	344	186	117	461
55°	366	334	166	56	51	330
65°	220	177	68	21	30	221
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°	1132.9	1132.9	1132.9	1132.9	1132.9	1132.9	1132.9	1132.9	1132.9
2.5°	1184.3	1181.1	1171.5	1152.2	1132.9	1110.4	1092.7	1079.9	1070.2
5°	1240.6	1234.1	1206.8	1166.6	1123.3	1079.9	1041.3	1018.8	1005.9
7.5°	1283.9	1272.7	1234.1	1177.9	1110.4	1044.5	985.1	949.7	935.2
10°	1320.9	1301.6	1251.8	1176.3	1087.9	1001.1	927.2	885.4	869.4
12.5°	1345.0	1324.1	1263.1	1174.7	1063.8	957.7	871.0	816.3	800.3
15°	1362.7	1337.0	1264.7	1161.8	1034.9	912.7	813.1	748.8	727.9
17.5°	1375.5	1340.2	1258.2	1147.4	1009.2	866.1	753.7	684.6	663.7
20°	1378.8	1340.2	1248.6	1126.5	970.6	819.5	689.4	620.3	594.6
22.5°	1380.4	1335.4	1234.1	1100.8	930.4	766.5	636.4	564.0	536.7
25°	1345.0	1319.3	1211.6	1057.4	869.4	708.7	583.3	504.6	482.1
27.5°	1261.5	1259.8	1185.9	999.5	813.1	646.0	528.7	453.2	432.3
30°	1176.3	1177.9	1152.2	935.2	747.2	586.5	474.0	400.1	377.6
32.5°	1071.8	1087.9	1086.3	862.9	676.5	530.3	421.0	351.9	329.4
35°	959.3	988.3	994.7	781.0	602.6	466.0	368.0	305.3	282.8
37.5°	858.1	887.0	901.5	708.7	533.5	409.8	318.2	263.5	241.0
40°	760.1	784.2	795.4	625.1	466.0	351.9	271.6	220.2	197.7
42.5°	665.3	700.6	697.4	554.4	406.6	305.3	229.8	178.4	155.9
45°	594.6	618.7	609.0	480.5	343.9	257.1	186.4	138.2	117.3
47.5°	523.9	541.5	527.1	417.8	290.9	212.1	151.1	101.2	78.7
50°	466.0	474.0	454.8	355.1	242.6	173.6	114.1	67.5	64.3
52.5°	411.4	416.2	388.9	302.1	200.9	139.8	83.6	53.0	56.2
55°	366.4	364.8	334.2	255.5	165.5	107.7	56.2	48.2	51.4
57.5°	323.0	318.2	287.6	212.1	135.0	83.6	33.7	41.8	45.0
60°	284.4	279.6	244.3	175.2	107.7	62.7	27.3	37.0	40.2
62.5°	253.9	242.6	207.3	144.6	86.8	45.0	24.1	32.1	35.4
65°	220.2	210.5	176.8	117.3	67.5	32.1	20.9	27.3	30.5
67.5°	192.8	181.6	149.4	96.4	54.6	22.5	19.3	24.1	27.3
70°	165.5	155.9	123.7	77.1	40.2	14.5	16.1	20.9	24.1
72.5°	143.0	131.8	102.8	61.1	30.5	11.2	14.5	17.7	19.3
75°	117.3	107.7	82.0	46.6	20.9	9.6	11.2	14.5	16.1
77.5°	98.0	88.4	64.3	35.4	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°	37.0	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

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

Scaled Data Report



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

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