

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: P837220

Luminaire Tested: HCSQ405D010-HM40525930-41SQLWW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837220
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: HCSQ405D010-HM40525930-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

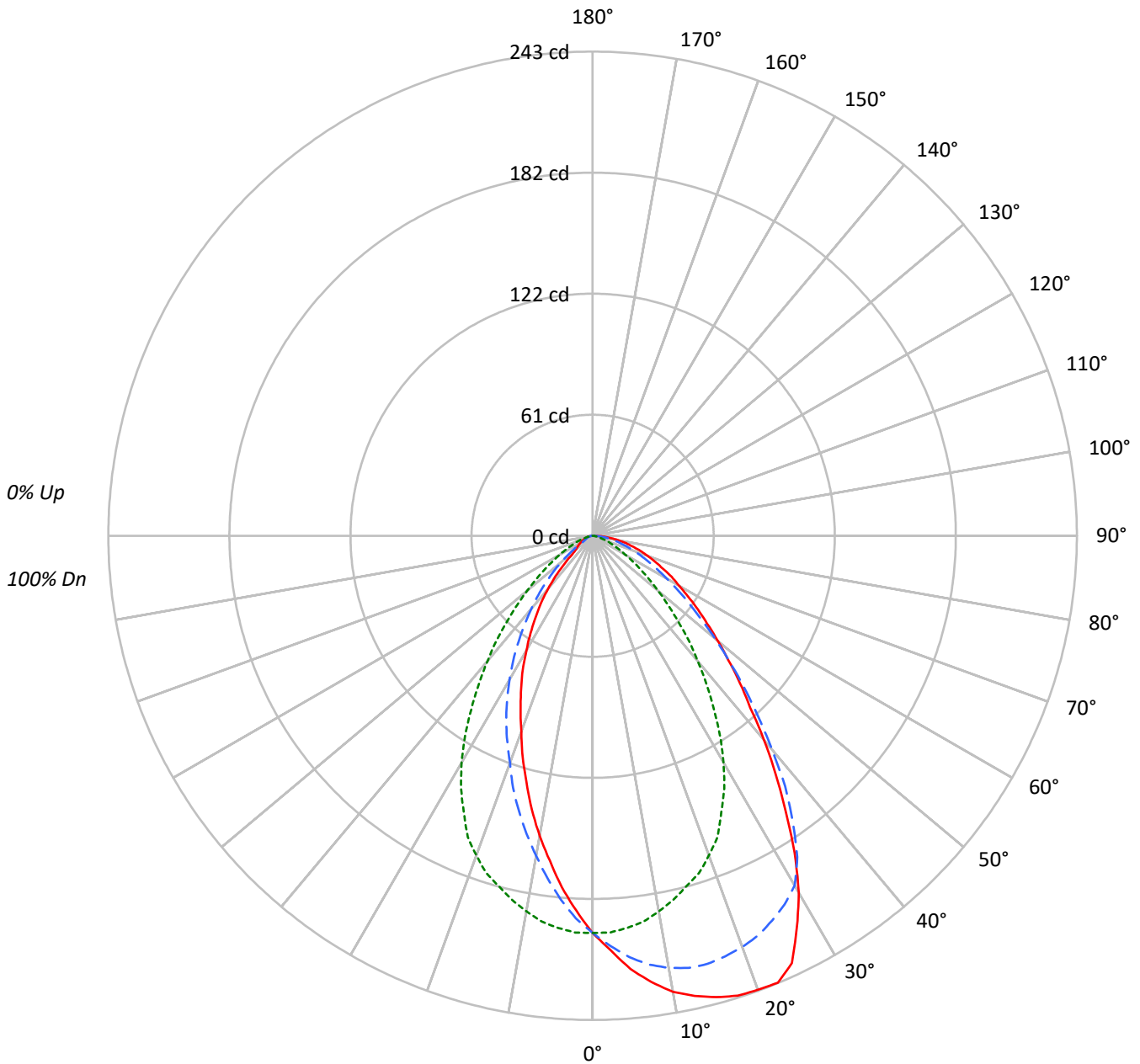
Lumens per Lamp: N/A
Luminaire Lumens: 322.3 lumens
Efficiency: N/A
Efficacy: 53.7 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): 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			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°	19307	19307	19307	19307	19307
5°	21219	20645	19216	17815	17212
10°	22861	21661	18828	16044	15041
15°	24040	22315	18253	14342	12848
20°	25000	22639	17598	12505	10783
25°	25290	22778	16344	10967	9064
30°	23144	22674	14699	9329	7428
35°	19963	20696	12536	7652	5890
40°	16908	17692	10370	6045	4401
45°	14330	14673	8289	4494	2822
50°	12358	12057	6435	3029	1703
55°	10894	9931	4915	1672	1520
60°	9688	8331	3662	930	1376
65°	8871	7129	2728	848	1238
70°	8242	6175	2011	793	1190
75°	7711	5390	1385	749	1048
80°	7420	4742	948	781	948
85°	7225	4113	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 14906 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.7	5.8
10°-20°	51.4	16.0
20°-30°	71.9	22.3
30°-40°	70.3	21.8
40°-50°	51.0	15.8
50°-60°	30.8	9.5
60°-70°	17.3	5.4
70°-80°	8.6	2.7
80°-90°	2.3	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°	142.1	44.1
0°-40°	212.4	65.9
0°-60°	294.2	91.3
0°-90°	322.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	322.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	199	199	199	199	199	
5°	218	212	198	183	177	21
15°	240	222	182	143	128	68
25°	237	213	153	103	85	107
35°	169	175	106	65	50	106
45°	105	107	60	33	21	81
55°	64	59	29	10	9	58
65°	39	31	12	4	5	39
75°	21	14	4	2	3	22
85°	6	4	1	1	1	7
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°	199.3	199.3	199.3	199.3	199.3	199.3	199.3	199.3	199.3
2.5°	208.3	207.8	206.1	202.7	199.3	195.3	192.2	190.0	188.3
5°	218.2	217.1	212.3	205.2	197.6	190.0	183.2	179.2	177.0
7.5°	225.9	223.9	217.1	207.2	195.3	183.7	173.3	167.1	164.5
10°	232.4	229.0	220.2	206.9	191.4	176.1	163.1	155.8	152.9
12.5°	236.6	232.9	222.2	206.6	187.1	168.5	153.2	143.6	140.8
15°	239.7	235.2	222.5	204.4	182.0	160.6	143.0	131.7	128.1
17.5°	242.0	235.8	221.3	201.8	177.5	152.4	132.6	120.4	116.7
20°	242.5	235.8	219.6	198.2	170.7	144.2	121.3	109.1	104.6
22.5°	242.8	234.9	217.1	193.6	163.7	134.8	111.9	99.2	94.4
25°	236.6	232.1	213.1	186.0	152.9	124.7	102.6	88.8	84.8
27.5°	221.9	221.6	208.6	175.8	143.0	113.6	93.0	79.7	76.0
30°	206.9	207.2	202.7	164.5	131.4	103.2	83.4	70.4	66.4
32.5°	188.5	191.4	191.1	151.8	119.0	93.3	74.1	61.9	57.9
35°	168.8	173.8	175.0	137.4	106.0	82.0	64.7	53.7	49.8
37.5°	151.0	156.0	158.6	124.7	93.9	72.1	56.0	46.4	42.4
40°	133.7	137.9	139.9	110.0	82.0	61.9	47.8	38.7	34.8
42.5°	117.0	123.2	122.7	97.5	71.5	53.7	40.4	31.4	27.4
45°	104.6	108.8	107.1	84.5	60.5	45.2	32.8	24.3	20.6
47.5°	92.2	95.3	92.7	73.5	51.2	37.3	26.6	17.8	13.9
50°	82.0	83.4	80.0	62.5	42.7	30.5	20.1	11.9	11.3
52.5°	72.4	73.2	68.4	53.1	35.3	24.6	14.7	9.3	9.9
55°	64.5	64.2	58.8	44.9	29.1	18.9	9.9	8.5	9.0
57.5°	56.8	56.0	50.6	37.3	23.7	14.7	5.9	7.3	7.9
60°	50.0	49.2	43.0	30.8	18.9	11.0	4.8	6.5	7.1
62.5°	44.7	42.7	36.5	25.4	15.3	7.9	4.2	5.7	6.2
65°	38.7	37.0	31.1	20.6	11.9	5.7	3.7	4.8	5.4
67.5°	33.9	31.9	26.3	17.0	9.6	4.0	3.4	4.2	4.8
70°	29.1	27.4	21.8	13.6	7.1	2.5	2.8	3.7	4.2
72.5°	25.2	23.2	18.1	10.7	5.4	2.0	2.5	3.1	3.4
75°	20.6	18.9	14.4	8.2	3.7	1.7	2.0	2.5	2.8
77.5°	17.2	15.5	11.3	6.2	2.5	1.4	1.7	2.3	2.3
80°	13.3	11.9	8.5	4.2	1.7	0.8	1.4	1.7	1.7
82.5°	9.6	8.5	5.9	2.8	0.8	0.8	0.8	1.1	1.1
85°	6.5	5.7	3.7	1.7	0.6	0.6	0.6	0.6	0.6
87.5°	3.7	2.8	1.7	0.6	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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