

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: P837200

Luminaire Tested: HCSQ405D010-HM40525830-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837200
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-HM40525830-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

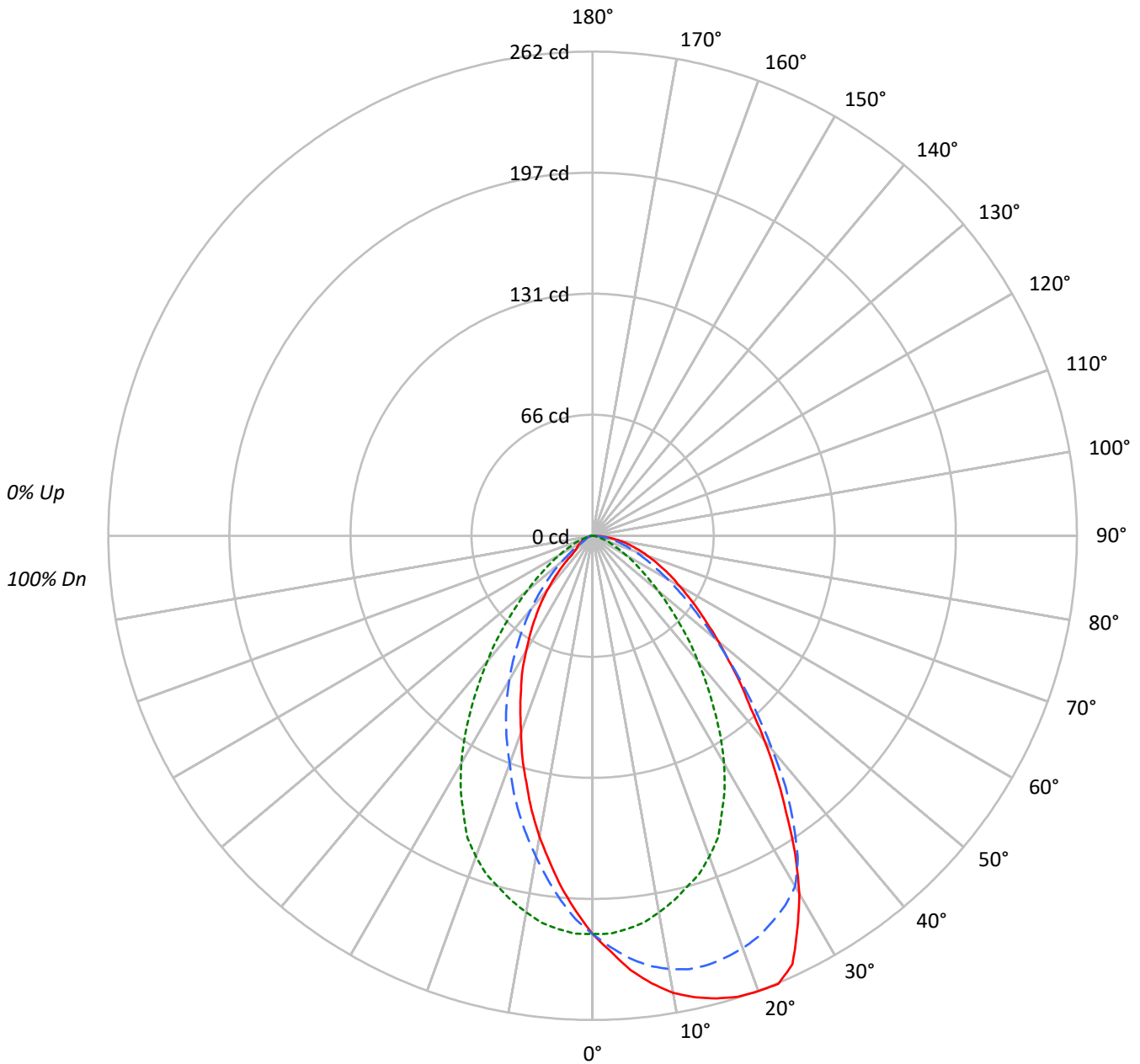
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 348.5 lumens
Efficiency: N/A
Efficacy: 58.1 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): 6
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°	20877	20877	20877	20877	20877
5°	22940	22318	20772	19255	18603
10°	24711	23422	20353	17343	16261
15°	25996	24120	19738	15505	13881
20°	27031	24485	19031	13515	11660
25°	27343	24628	17669	11854	9802
30°	25024	24509	15896	10090	8032
35°	21583	22375	13553	8278	6363
40°	18286	19134	11205	6525	4755
45°	15495	15865	8960	4864	3055
50°	13353	13037	6948	3270	1839
55°	11772	10742	5320	1807	1655
60°	10482	9009	3972	1008	1473
65°	9605	7702	2934	917	1330
70°	8922	6656	2153	878	1303
75°	8347	5839	1497	786	1160
80°	8034	5133	1004	837	1004
85°	7781	4446	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 16125 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.2	5.8
10°-20°	55.6	16.0
20°-30°	77.8	22.3
30°-40°	76.0	21.8
40°-50°	55.2	15.8
50°-60°	33.3	9.5
60°-70°	18.7	5.4
70°-80°	9.3	2.7
80°-90°	2.5	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°	153.6	44.1
0°-40°	229.6	65.9
0°-60°	318.0	91.3
0°-90°	348.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	348.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	216	216	216	216	216	
5°	236	230	214	198	191	23
15°	259	240	197	155	138	73
25°	256	230	165	111	92	115
35°	182	189	115	70	54	114
45°	113	116	65	36	22	88
55°	70	64	32	11	10	63
65°	42	34	13	4	6	42
75°	22	16	4	2	3	24
85°	7	4	1	1	1	8
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°	215.5	215.5	215.5	215.5	215.5	215.5	215.5	215.5	215.5
2.5°	225.2	224.6	222.8	219.1	215.5	211.2	207.8	205.4	203.5
5°	235.9	234.7	229.5	221.9	213.6	205.4	198.0	193.8	191.3
7.5°	244.2	242.0	234.7	224.0	211.2	198.7	187.3	180.6	177.9
10°	251.2	247.5	238.1	223.7	206.9	190.4	176.3	168.4	165.3
12.5°	255.8	251.8	240.2	223.4	202.3	182.1	165.6	155.3	152.2
15°	259.2	254.3	240.5	221.0	196.8	173.6	154.6	142.4	138.4
17.5°	261.6	254.9	239.3	218.2	191.9	164.7	143.3	130.2	126.2
20°	262.2	254.9	237.5	214.2	184.6	155.9	131.1	118.0	113.1
22.5°	262.5	254.0	234.7	209.3	177.0	145.8	121.0	107.3	102.1
25°	255.8	250.9	230.4	201.1	165.3	134.8	110.9	96.0	91.7
27.5°	239.9	239.6	225.5	190.1	154.6	122.9	100.5	86.2	82.2
30°	223.7	224.0	219.1	177.9	142.1	111.5	90.2	76.1	71.8
32.5°	203.8	206.9	206.6	164.1	128.7	100.9	80.1	66.9	62.7
35°	182.5	188.0	189.2	148.5	114.6	88.6	70.0	58.1	53.8
37.5°	163.2	168.7	171.5	134.8	101.5	77.9	60.5	50.1	45.8
40°	144.6	149.1	151.3	118.9	88.6	66.9	51.6	41.9	37.6
42.5°	126.5	133.2	132.6	105.4	77.3	58.1	43.7	33.9	29.6
45°	113.1	117.7	115.8	91.4	65.4	48.9	35.5	26.3	22.3
47.5°	99.6	103.0	100.2	79.5	55.3	40.3	28.7	19.3	15.0
50°	88.6	90.2	86.5	67.5	46.1	33.0	21.7	12.8	12.2
52.5°	78.2	79.2	74.0	57.5	38.2	26.6	15.9	10.1	10.7
55°	69.7	69.4	63.6	48.6	31.5	20.5	10.7	9.2	9.8
57.5°	61.4	60.5	54.7	40.3	25.7	15.9	6.4	7.9	8.6
60°	54.1	53.2	46.5	33.3	20.5	11.9	5.2	7.0	7.6
62.5°	48.3	46.1	39.4	27.5	16.5	8.6	4.6	6.1	6.7
65°	41.9	40.0	33.6	22.3	12.8	6.1	4.0	5.2	5.8
67.5°	36.7	34.5	28.4	18.3	10.4	4.3	3.7	4.6	5.2
70°	31.5	29.6	23.5	14.7	7.6	2.8	3.1	4.0	4.6
72.5°	27.2	25.1	19.6	11.6	5.8	2.1	2.8	3.4	3.7
75°	22.3	20.5	15.6	8.9	4.0	1.8	2.1	2.8	3.1
77.5°	18.6	16.8	12.2	6.7	2.8	1.5	1.8	2.4	2.4
80°	14.4	12.8	9.2	4.6	1.8	0.9	1.5	1.8	1.8
82.5°	10.4	9.2	6.4	3.1	0.9	0.9	0.9	1.2	1.2
85°	7.0	6.1	4.0	1.8	0.6	0.6	0.6	0.6	0.6
87.5°	4.0	3.1	1.8	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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