

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: P837222

Luminaire Tested: HCSQ405D010-HM40525930-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837222
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525930-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

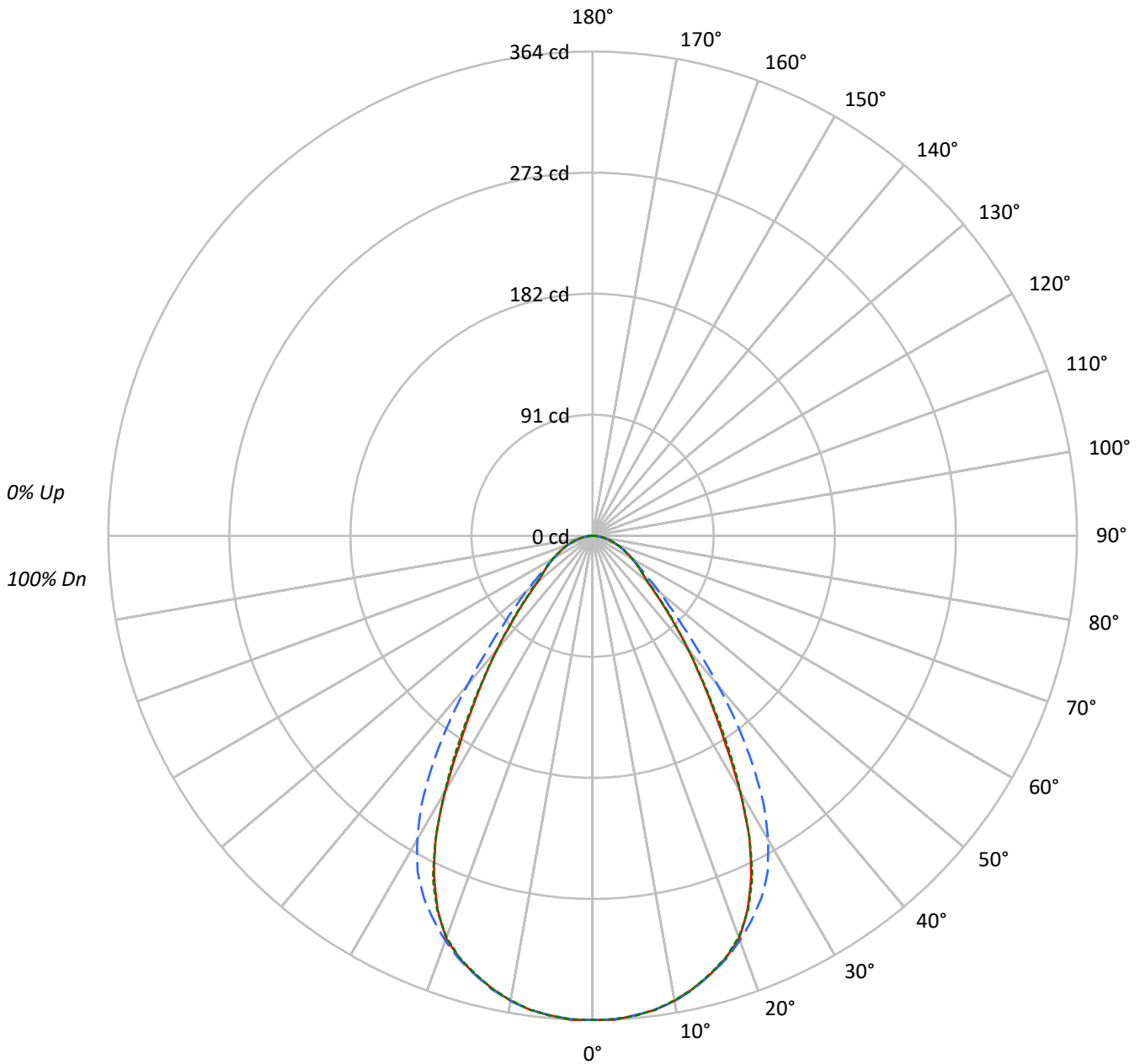
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 528.2 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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					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	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71					71			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64					64			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58					58			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41					41			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35263	35263	35263
5°	35203	35203	35232
10°	34911	34941	34882
15°	34240	34260	34180
20°	33206	33381	33093
25°	30143	32099	30346
30°	24744	29487	24833
35°	18591	24752	18863
40°	14164	18451	14126
45°	10577	13097	10768
50°	8063	9766	8229
55°	7263	7651	7263
60°	6626	6568	6568
65°	6029	6029	6029
70°	5608	5523	5523
75°	5203	5090	5203
80°	4742	4575	4742
85°	4113	4113	4113

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13097 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	6.5
10°-20°	96.1	18.2
20°-30°	132.2	25.0
30°-40°	112.5	21.3
40°-50°	68.0	12.9
50°-60°	40.1	7.6
60°-70°	26.3	5.0
70°-80°	14.6	2.8
80°-90°	4.3	0.8
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°	262.6	49.7
0°-40°	375.1	71.0
0°-60°	483.1	91.5
0°-90°	528.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	528.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	362	362	362	362	362	34
15°	341	342	342	341	341	96
25°	282	291	300	291	284	127
35°	157	173	209	178	160	100
45°	77	85	96	86	79	61
55°	43	44	45	44	43	39
65°	26	27	26	26	26	26
75°	14	14	14	14	14	15
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	364.0	364.0	364.0	364.0	364.0
2.5°	364.3	363.4	363.7	363.4	363.7
5°	362.0	362.3	362.0	361.7	362.3
7.5°	359.5	359.2	359.2	358.9	359.5
10°	354.9	354.4	355.2	354.6	354.6
12.5°	348.7	349.6	349.3	349.3	348.7
15°	341.4	342.2	341.6	341.4	340.8
17.5°	332.9	333.4	333.7	332.6	332.6
20°	322.1	323.3	323.8	321.8	321.0
22.5°	304.3	309.4	312.5	309.1	304.9
25°	282.0	290.7	300.3	291.3	283.9
27.5°	255.1	267.5	284.8	269.5	255.1
30°	221.2	239.5	263.6	241.5	222.0
32.5°	186.1	205.6	239.3	209.0	190.1
35°	157.2	173.1	209.3	177.9	159.5
37.5°	132.4	145.9	177.9	149.0	133.8
40°	112.0	122.7	145.9	124.2	111.7
42.5°	92.5	102.7	118.2	104.1	93.6
45°	77.2	85.4	95.6	86.3	78.6
47.5°	64.2	71.0	78.3	71.0	65.0
50°	53.5	58.8	64.8	58.8	54.6
52.5°	47.8	49.5	53.5	49.8	47.8
55°	43.0	43.8	45.3	43.8	43.0
57.5°	38.5	39.0	38.7	38.7	38.5
60°	34.2	34.5	33.9	34.2	33.9
62.5°	30.3	30.3	29.7	30.3	30.0
65°	26.3	26.6	26.3	26.3	26.3
67.5°	22.9	22.9	22.6	22.9	22.9
70°	19.8	19.8	19.5	19.8	19.5
72.5°	16.7	16.7	16.4	16.4	16.4
75°	13.9	13.9	13.6	13.6	13.9
77.5°	11.0	11.0	10.7	11.0	11.0
80°	8.5	8.5	8.2	8.5	8.5
82.5°	5.9	5.9	5.9	6.2	6.2
85°	3.7	3.7	3.7	3.7	3.7
87.5°	1.7	1.7	1.7	1.7	2.0
90°	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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