

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: P837267

Luminaire Tested: HCSQ407D010-HM40525935-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837267
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: HCSQ407D010-HM40525935-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

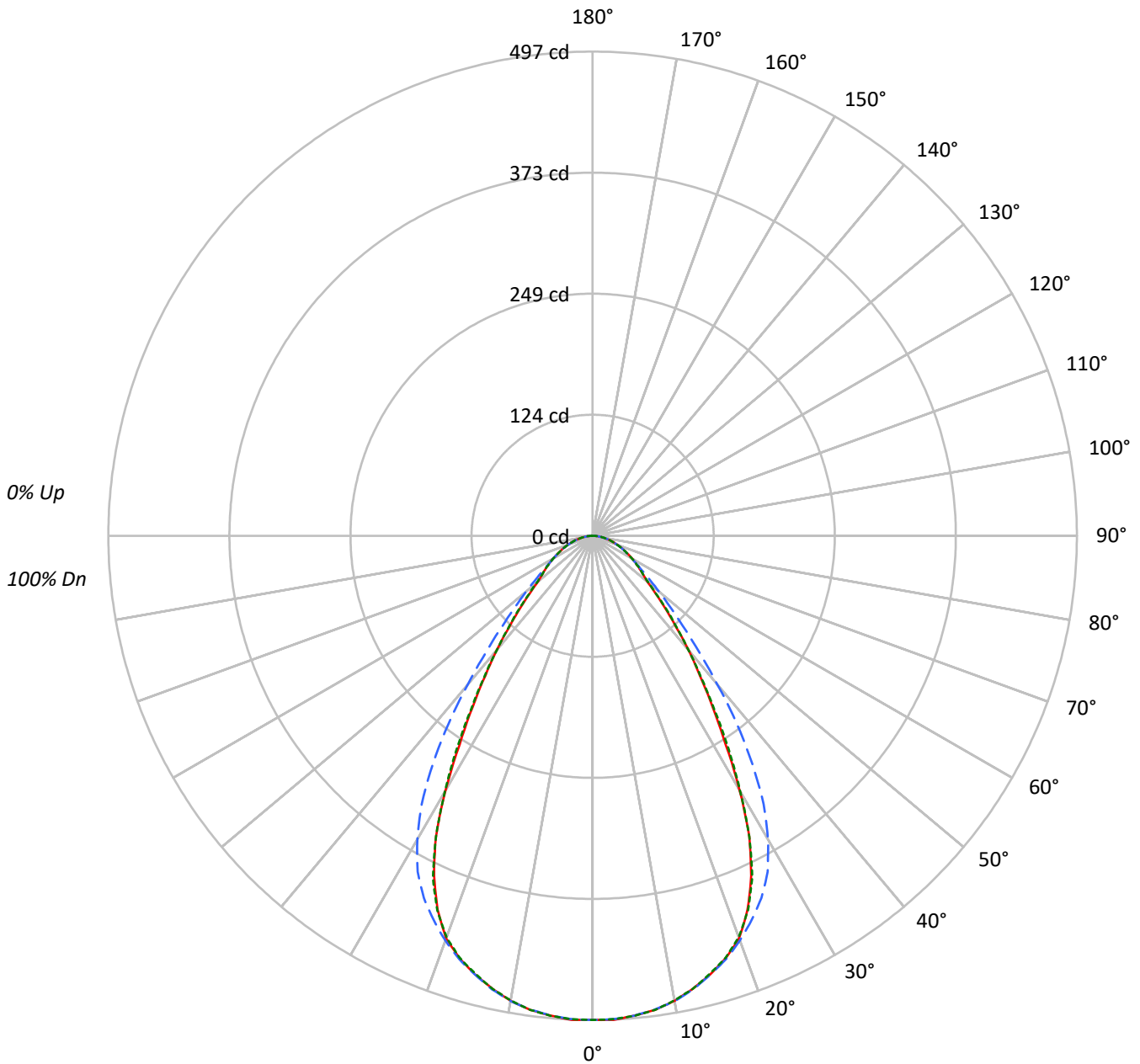
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 721.2 lumens
Efficiency: N/A
Efficacy: 90.1 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): 8
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°	48147	48147	48147
5°	48068	48068	48098
10°	47670	47709	47631
15°	46746	46787	46666
20°	45340	45577	45186
25°	41153	43836	41441
30°	33782	40259	33905
35°	25391	33788	25758
40°	19336	25191	19285
45°	14440	17879	14700
50°	11002	13323	11228
55°	9914	10438	9914
60°	9048	8971	8971
65°	8229	8229	8229
70°	7648	7534	7534
75°	7074	6925	7074
80°	6471	6248	6471
85°	5558	5558	5558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17879 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.9	6.5
10°-20°	131.2	18.2
20°-30°	180.5	25.0
30°-40°	153.6	21.3
40°-50°	92.8	12.9
50°-60°	54.7	7.6
60°-70°	35.9	5.0
70°-80°	19.9	2.8
80°-90°	5.8	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°	358.5	49.7
0°-40°	512.2	71.0
0°-60°	659.6	91.5
0°-90°	721.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	721.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	494	495	494	494	495	47
15°	466	467	466	466	465	131
25°	385	397	410	398	388	174
35°	215	236	286	243	218	136
45°	105	117	130	118	107	83
55°	59	60	62	60	59	53
65°	36	36	36	36	36	36
75°	19	19	18	18	19	20
85°	5	5	5	5	5	6
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	497.0	497.0	497.0	497.0	497.0
2.5°	497.3	496.2	496.6	496.2	496.6
5°	494.3	494.6	494.3	493.9	494.6
7.5°	490.8	490.4	490.4	490.0	490.8
10°	484.6	483.8	485.0	484.2	484.2
12.5°	476.1	477.3	476.9	476.9	476.1
15°	466.1	467.2	466.5	466.1	465.3
17.5°	454.5	455.3	455.6	454.1	454.1
20°	439.8	441.4	442.1	439.4	438.3
22.5°	415.5	422.4	426.7	422.0	416.3
25°	385.0	397.0	410.1	397.7	387.7
27.5°	348.3	365.3	388.8	368.0	348.3
30°	302.0	327.1	359.9	329.8	303.1
32.5°	254.1	280.7	326.7	285.4	259.5
35°	214.7	236.3	285.7	242.9	217.8
37.5°	180.7	199.2	242.9	203.5	182.6
40°	152.9	167.6	199.2	169.5	152.5
42.5°	126.3	140.2	161.4	142.1	127.8
45°	105.4	116.6	130.5	117.8	107.3
47.5°	87.7	96.9	107.0	96.9	88.8
50°	73.0	80.3	88.4	80.3	74.5
52.5°	65.3	67.6	73.0	68.0	65.3
55°	58.7	59.9	61.8	59.9	58.7
57.5°	52.5	53.3	52.9	52.9	52.5
60°	46.7	47.1	46.3	46.7	46.3
62.5°	41.3	41.3	40.5	41.3	40.9
65°	35.9	36.3	35.9	35.9	35.9
67.5°	31.3	31.3	30.9	31.3	31.3
70°	27.0	27.0	26.6	27.0	26.6
72.5°	22.8	22.8	22.4	22.4	22.4
75°	18.9	18.9	18.5	18.5	18.9
77.5°	15.1	15.1	14.7	15.1	15.1
80°	11.6	11.6	11.2	11.6	11.6
82.5°	8.1	8.1	8.1	8.5	8.5
85°	5.0	5.0	5.0	5.0	5.0
87.5°	2.3	2.3	2.3	2.3	2.7
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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