

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: P837204

Luminaire Tested: HCSQ405D010-HM40525835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

Summary

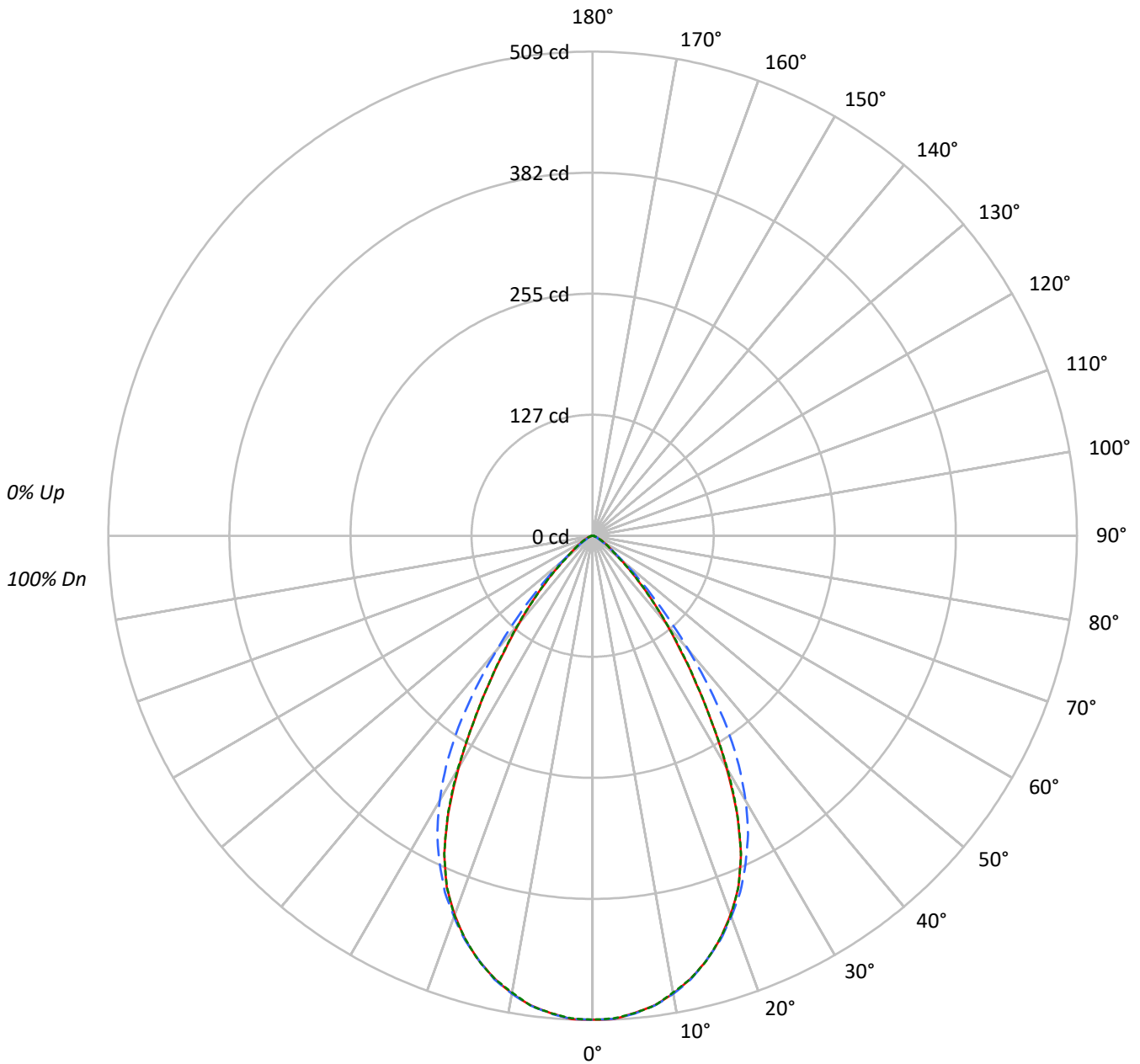
Lumens per Lamp: N/A
Luminaire Lumens: 571.8 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85								
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77								
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71								
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65								
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60								
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56								
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52								
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48								
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	49281	49281	49281
5°	48983	49041	48983
10°	48064	48093	47965
15°	46355	46325	46385
20°	43701	43928	43794
25°	39432	40640	39432
30°	31489	35952	31735
35°	22482	29093	22517
40°	15175	19791	15416
45°	9645	11714	9686
50°	5486	6255	5305
55°	3614	3023	3564
60°	2499	1763	2441
65°	1719	1307	1719
70°	1246	991	1246
75°	823	823	823
80°	502	725	725
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11714 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	8.3
10°-20°	129.6	22.7
20°-30°	169.7	29.7
30°-40°	133.3	23.3
40°-50°	62.3	10.9
50°-60°	19.3	3.4
60°-70°	6.9	1.2
70°-80°	2.4	0.4
80°-90°	0.6	0.1
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°	346.9	60.7
0°-40°	480.3	84.0
0°-60°	561.9	98.3
0°-90°	571.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	571.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	504	504	504	505	504	48
15°	462	462	462	462	462	129
25°	369	374	380	374	369	166
35°	190	207	246	210	190	120
45°	70	79	86	77	71	56
55°	21	20	18	20	21	20
65°	8	7	6	7	8	8
75°	2	2	2	2	2	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	508.7	508.7	508.7	508.7	508.7
2.5°	508.7	508.1	508.4	507.8	507.8
5°	503.7	504.0	504.3	504.9	503.7
7.5°	498.0	498.6	498.3	498.3	498.3
10°	488.6	488.9	488.9	488.9	487.6
12.5°	476.7	477.3	477.6	476.7	476.7
15°	462.2	462.2	461.9	462.2	462.5
17.5°	444.9	445.9	445.9	444.9	444.6
20°	423.9	425.4	426.1	424.8	424.8
22.5°	400.3	401.9	405.6	402.5	400.0
25°	368.9	373.9	380.2	374.2	368.9
27.5°	328.3	339.3	353.8	341.2	329.3
30°	281.5	299.4	321.4	300.4	283.7
32.5°	233.8	253.9	286.2	255.4	233.8
35°	190.1	207.4	246.0	209.9	190.4
37.5°	151.1	167.8	201.7	169.7	153.3
40°	120.0	133.5	156.5	133.2	121.9
42.5°	93.6	103.4	118.5	103.1	93.3
45°	70.4	78.9	85.5	77.3	70.7
47.5°	51.8	57.5	61.3	56.6	50.6
50°	36.4	40.5	41.5	39.6	35.2
52.5°	27.3	27.3	27.7	27.0	26.7
55°	21.4	20.1	17.9	19.8	21.1
57.5°	16.7	15.4	12.6	14.8	16.3
60°	12.9	11.6	9.1	11.3	12.6
62.5°	10.1	8.8	7.2	8.8	9.7
65°	7.5	6.9	5.7	6.6	7.5
67.5°	5.7	5.0	4.4	5.0	5.7
70°	4.4	4.1	3.5	3.8	4.4
72.5°	3.1	2.8	2.8	2.8	3.1
75°	2.2	2.2	2.2	2.2	2.2
77.5°	1.6	1.6	1.6	1.6	1.6
80°	0.9	0.9	1.3	1.3	1.3
82.5°	0.6	0.6	0.9	0.9	0.9
85°	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.3	0.6	0.6
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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