

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: P837223

Luminaire Tested: HCSQ405D010-HM40525935-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837223
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525935-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

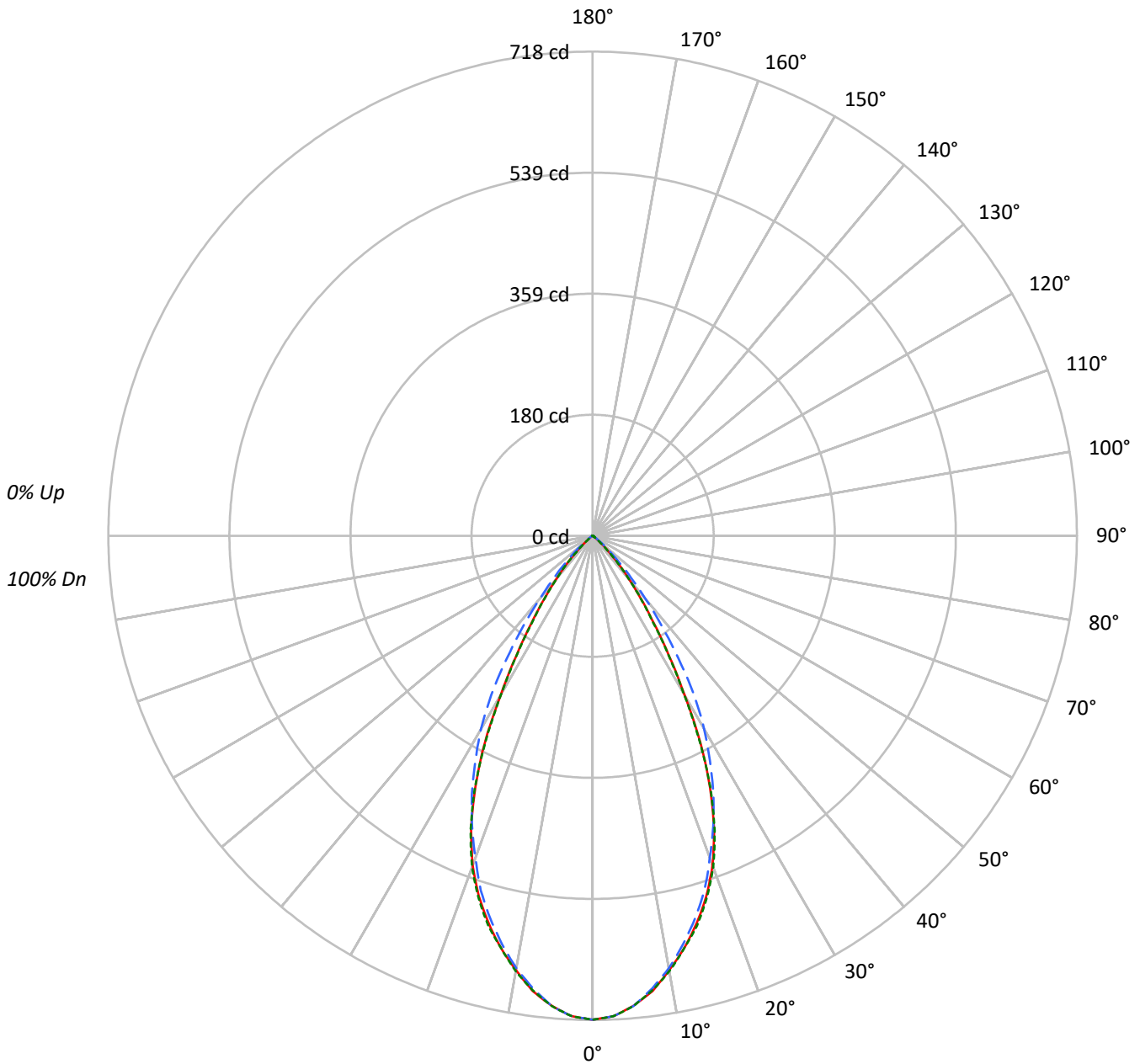
Lumens per Lamp: N/A
Luminaire Lumens: 579.9 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94								
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81								
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76								
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71								
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66								
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62								
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58								
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55								
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	69518	69518	69518
5°	68023	68052	68052
10°	64344	64058	64511
15°	59704	58882	60025
20°	53588	52392	53917
25°	44017	45289	44167
30°	30426	37004	30203
35°	18733	26136	18283
40°	10572	15289	10496
45°	4822	7658	4631
50°	1236	3075	1266
55°	591	929	540
60°	388	329	446
65°	344	275	344
70°	255	255	340
75°	225	225	337
80°	335	335	335
85°	333	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	11.3
10°-20°	164.9	28.4
20°-30°	188.5	32.5
30°-40°	117.0	20.2
40°-50°	36.9	6.4
50°-60°	4.8	0.8
60°-70°	1.4	0.2
70°-80°	0.8	0.1
80°-90°	0.5	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°	418.6	72.2
0°-40°	535.6	92.4
0°-60°	577.2	99.5
0°-90°	579.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	579.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	700	699	700	699	700	65
15°	595	591	587	591	598	166
25°	412	418	424	418	413	185
35°	158	183	221	178	155	102
45°	35	42	56	42	34	30
55°	4	4	6	4	3	3
65°	2	2	1	2	2	1
75°	1	1	1	1	1	1
85°	0	1	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.6	717.6	717.6	717.6	717.6
2.5°	713.2	713.8	713.2	714.4	713.2
5°	699.5	698.9	699.8	699.2	699.8
7.5°	680.9	677.4	677.1	679.4	679.7
10°	654.1	653.2	651.2	653.2	655.8
12.5°	626.7	623.2	620.3	624.4	626.7
15°	595.3	590.9	587.1	590.9	598.5
17.5°	560.6	554.5	551.3	555.7	562.9
20°	519.8	513.4	508.2	512.0	523.0
22.5°	470.9	470.3	466.8	468.9	472.9
25°	411.8	417.6	423.7	417.6	413.2
27.5°	346.8	362.6	376.6	358.2	344.2
30°	272.0	295.9	330.8	294.1	270.0
32.5°	210.3	235.3	279.9	232.1	208.5
35°	158.4	182.9	221.0	178.5	154.6
37.5°	116.5	134.8	168.0	133.7	116.5
40°	83.6	95.5	120.9	95.2	83.0
42.5°	58.0	65.8	84.5	65.2	56.2
45°	35.2	42.2	55.9	42.5	33.8
47.5°	18.6	26.8	35.2	25.6	18.6
50°	8.2	14.3	20.4	14.0	8.4
52.5°	4.4	6.1	11.1	6.1	4.4
55°	3.5	3.5	5.5	3.5	3.2
57.5°	2.6	2.6	2.9	2.6	2.6
60°	2.0	2.0	1.7	2.0	2.3
62.5°	1.7	1.7	1.5	1.7	1.7
65°	1.5	1.5	1.2	1.5	1.5
67.5°	1.2	1.2	1.2	1.2	1.2
70°	0.9	0.9	0.9	1.2	1.2
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.6	0.6	0.6	0.6	0.9
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6
82.5°	0.3	0.6	0.6	0.6	0.6
85°	0.3	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.6	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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