

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: P837386

Luminaire Tested: HCSQ420D010-HM40525935-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837386
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ420D010-HM40525935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

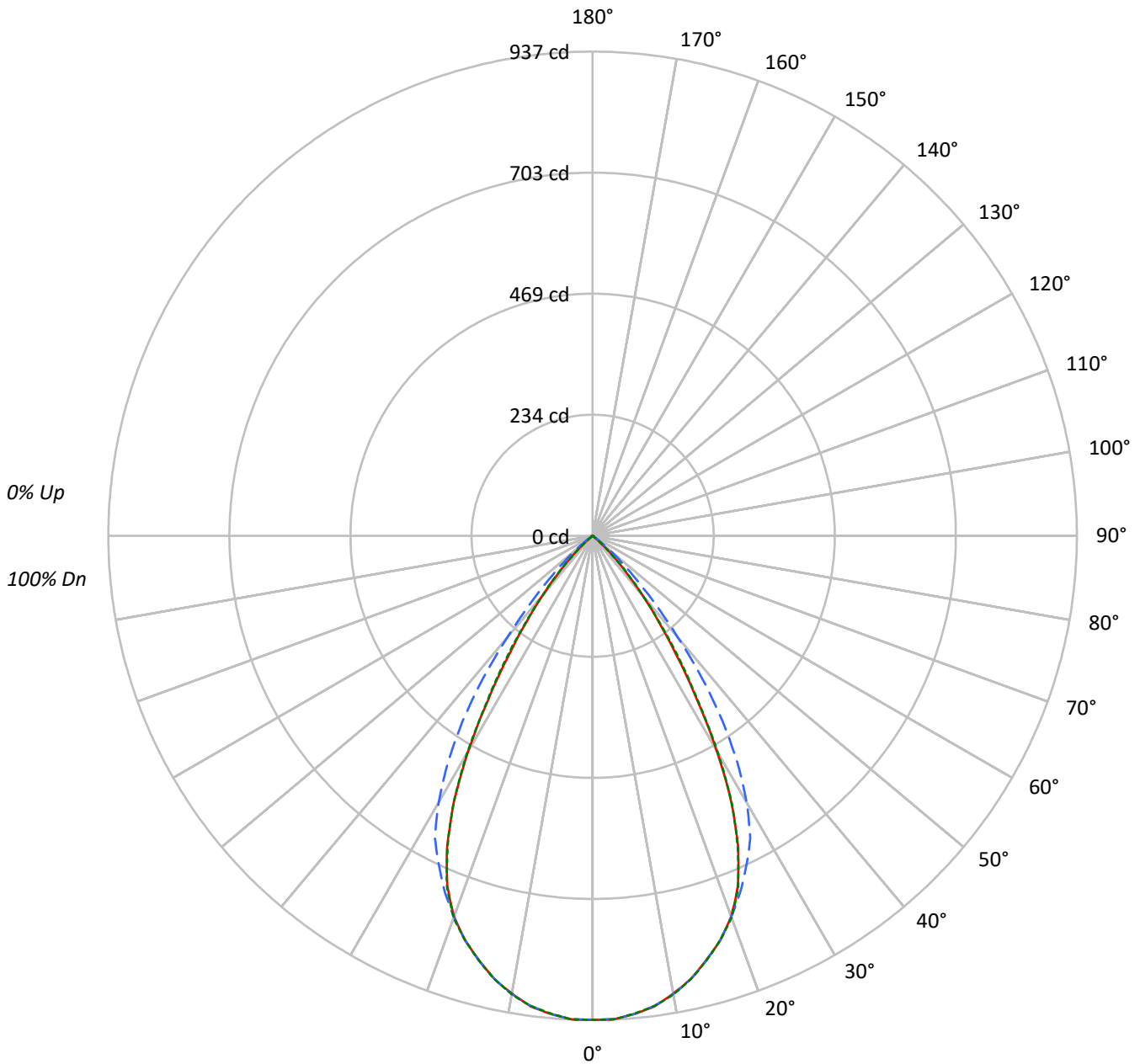
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 935.9 lumens
Efficiency: N/A
Efficacy: 46.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	90753	90753	90753
5°	90341	90341	90254
10°	88484	88562	88651
15°	85239	85329	85329
20°	80814	80897	81082
25°	71253	75240	70975
30°	53761	66692	54242
35°	33705	51906	34840
40°	19007	32311	19007
45°	7974	16317	7864
50°	648	6285	784
55°	287	1317	287
60°	329	174	329
65°	206	206	206
70°	255	255	255
75°	337	337	337
80°	0	502	502
85°	0	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16317 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.8	9.4
10°-20°	238.9	25.5
20°-30°	309.9	33.1
30°-40°	220.3	23.5
40°-50°	71.4	7.6
50°-60°	5.1	0.5
60°-70°	0.9	0.1
70°-80°	0.9	0.1
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°	636.5	68.0
0°-40°	856.8	91.6
0°-60°	933.4	99.7
0°-90°	935.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	935.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	937	937	937	937	937	
5°	929	930	929	929	928	88
15°	850	852	851	852	851	239
25°	667	684	704	687	664	298
35°	285	337	439	341	295	182
45°	58	83	119	84	57	48
55°	2	2	8	2	2	2
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	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°	936.8	936.8	936.8	936.8	936.8
2.5°	936.8	936.8	936.0	936.0	936.8
5°	929.0	929.9	929.0	929.0	928.1
7.5°	918.6	918.6	917.7	917.7	917.7
10°	899.5	900.3	900.3	900.3	901.2
12.5°	878.6	878.6	878.6	878.6	878.6
15°	849.9	852.5	850.8	852.5	850.8
17.5°	821.2	821.2	820.4	822.1	820.4
20°	783.9	783.9	784.7	786.5	786.5
22.5°	734.3	743.0	746.5	744.8	736.1
25°	666.6	683.9	703.9	687.4	664.0
27.5°	581.4	614.4	660.5	619.6	583.1
30°	480.6	530.1	596.2	531.9	484.9
32.5°	376.3	433.7	521.4	438.0	379.8
35°	285.0	337.2	438.9	340.7	294.6
37.5°	210.3	258.1	348.5	259.8	216.4
40°	150.3	185.1	255.5	188.6	150.3
42.5°	96.5	131.2	179.9	132.1	100.8
45°	58.2	82.6	119.1	84.3	57.4
47.5°	26.1	46.9	73.9	48.7	26.1
50°	4.3	19.1	41.7	20.0	5.2
52.5°	2.6	3.5	20.0	3.5	2.6
55°	1.7	1.7	7.8	1.7	1.7
57.5°	1.7	1.7	1.7	1.7	1.7
60°	1.7	0.9	0.9	0.9	1.7
62.5°	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.9	0.9	0.9
67.5°	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.0	0.9	0.9	0.9	0.9
82.5°	0.0	0.9	0.9	0.9	0.9
85°	0.0	0.0	0.9	0.9	0.9
87.5°	0.0	0.0	0.9	0.9	0.9
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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