

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: P837376

Luminaire Tested: HCSQ420D010-HM40525927-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837376
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-HM40525927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

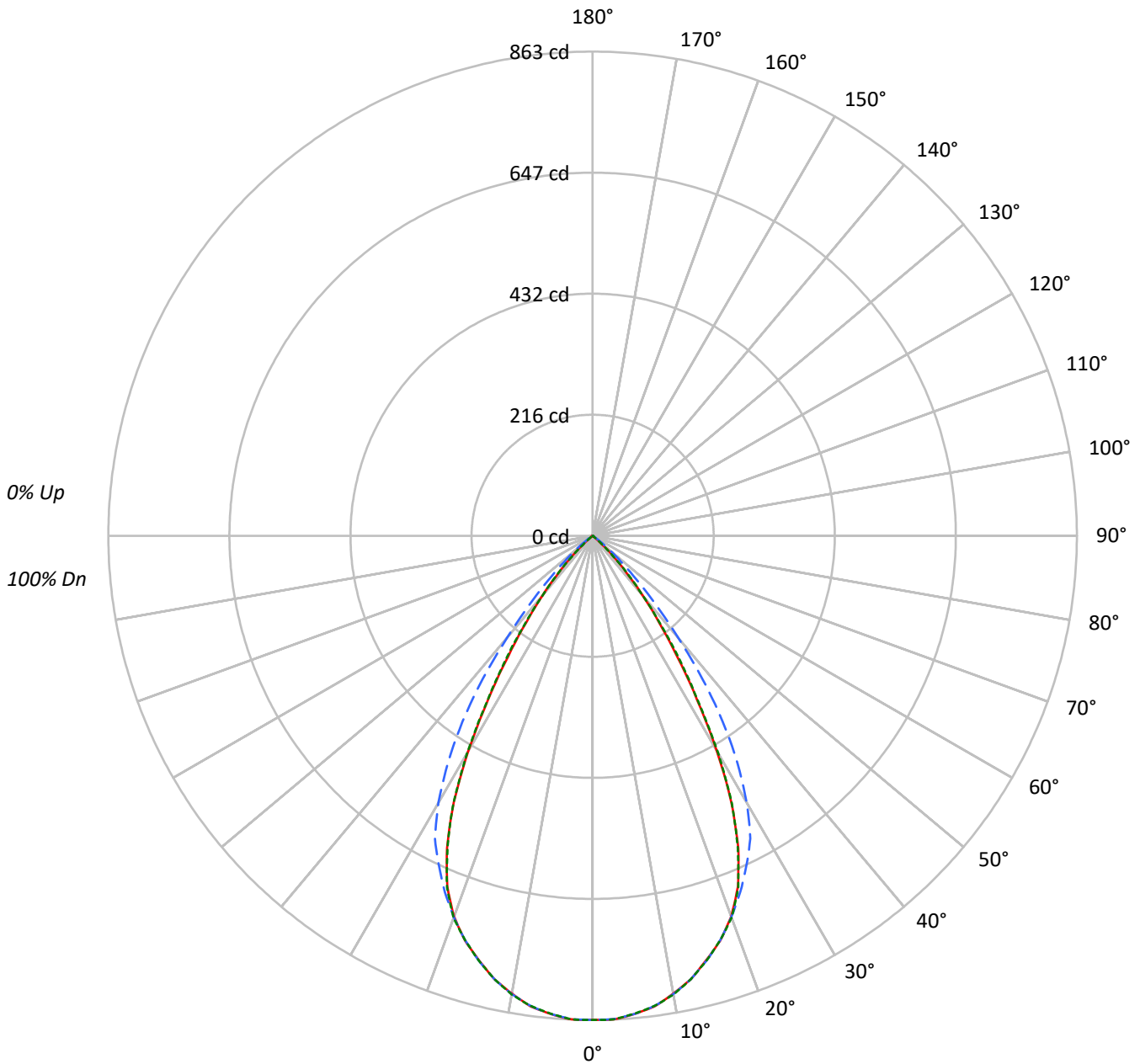
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 862.1 lumens
Efficiency: N/A
Efficacy: 43.1 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					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	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°	83603	83603	83603
5°	83223	83223	83145
10°	81509	81588	81667
15°	78529	78610	78610
20°	74443	74526	74691
25°	65641	69318	65385
30°	49521	61435	49969
35°	31056	47814	32097
40°	17515	29769	17515
45°	7343	15029	7234
50°	603	5787	723
55°	270	1216	270
60°	310	155	310
65°	183	183	183
70°	227	227	227
75°	299	299	299
80°	0	446	446
85°	0	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15029 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.9	9.4
10°-20°	220.0	25.5
20°-30°	285.5	33.1
30°-40°	202.9	23.5
40°-50°	65.8	7.6
50°-60°	4.7	0.6
60°-70°	0.8	0.1
70°-80°	0.8	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°	586.4	68.0
0°-40°	789.3	91.6
0°-60°	859.9	99.7
0°-90°	862.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	862.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	856	857	856	856	855	81
15°	783	785	784	785	784	220
25°	614	630	648	633	612	275
35°	263	311	404	314	271	168
45°	54	76	110	78	53	45
55°	2	2	7	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°	863.0	863.0	863.0	863.0	863.0
2.5°	863.0	863.0	862.2	862.2	863.0
5°	855.8	856.6	855.8	855.8	855.0
7.5°	846.2	846.2	845.4	845.4	845.4
10°	828.6	829.4	829.4	829.4	830.2
12.5°	809.4	809.4	809.4	809.4	809.4
15°	783.0	785.4	783.8	785.4	783.8
17.5°	756.6	756.6	755.8	757.4	755.8
20°	722.1	722.1	722.9	724.5	724.5
22.5°	676.5	684.5	687.7	686.1	678.1
25°	614.1	630.1	648.5	633.3	611.7
27.5°	535.6	566.0	608.5	570.8	537.2
30°	442.7	488.4	549.2	490.0	446.7
32.5°	346.7	399.5	480.4	403.5	349.9
35°	262.6	310.6	404.3	313.8	271.4
37.5°	193.7	237.8	321.0	239.4	199.3
40°	138.5	170.5	235.4	173.7	138.5
42.5°	88.9	120.9	165.7	121.7	92.9
45°	53.6	76.1	109.7	77.7	52.8
47.5°	24.0	43.2	68.1	44.8	24.0
50°	4.0	17.6	38.4	18.4	4.8
52.5°	2.4	3.2	18.4	3.2	2.4
55°	1.6	1.6	7.2	1.6	1.6
57.5°	1.6	1.6	1.6	1.6	1.6
60°	1.6	0.8	0.8	0.8	1.6
62.5°	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8
67.5°	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8
80°	0.0	0.8	0.8	0.8	0.8
82.5°	0.0	0.8	0.8	0.8	0.8
85°	0.0	0.0	0.8	0.8	0.8
87.5°	0.0	0.0	0.8	0.8	0.8
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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