

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: P837382

Luminaire Tested: HCSQ420D010-HM40525930-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837382
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: HCSQ420D010-HM40525930-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

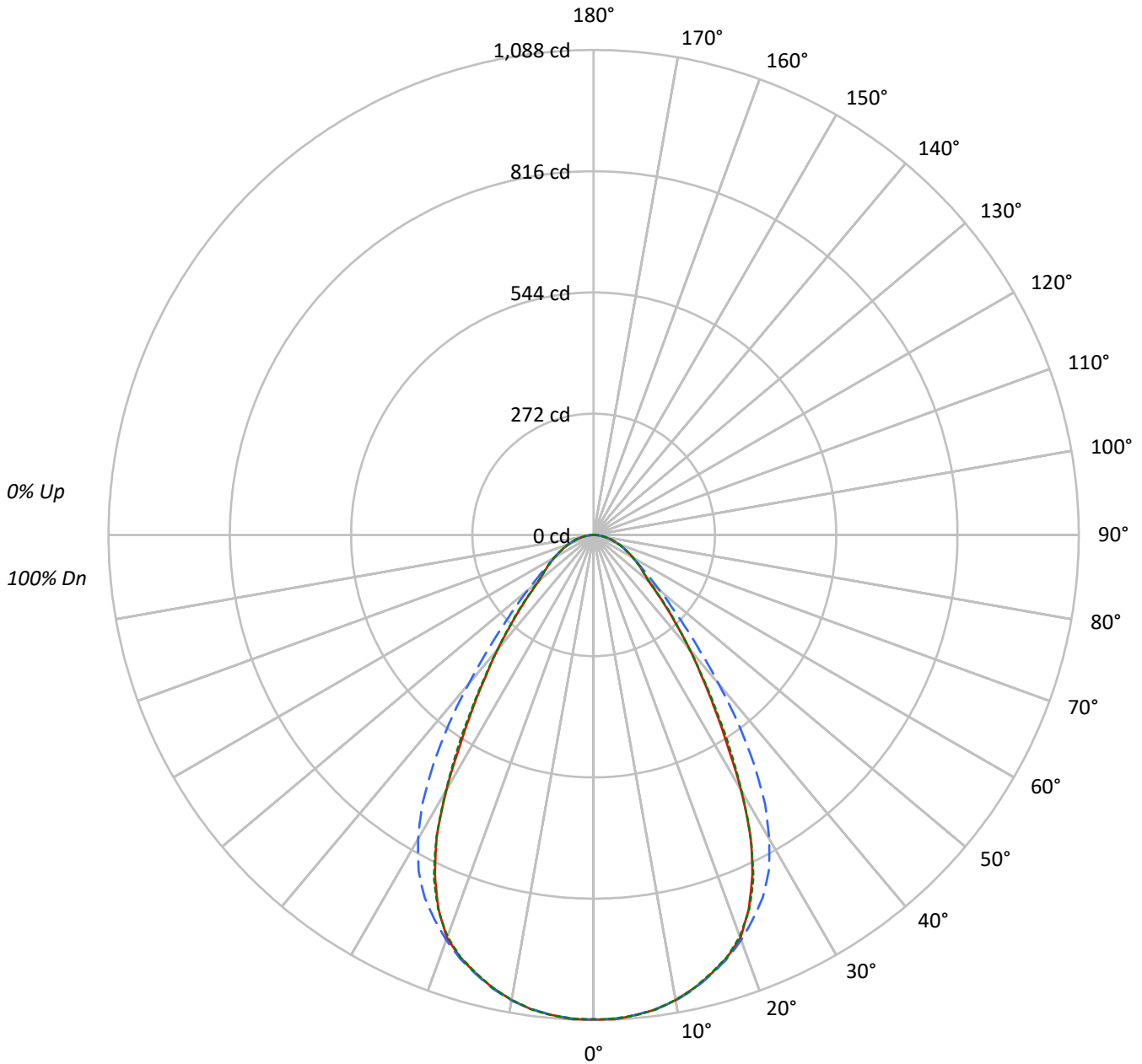
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1577.3 lumens
Efficiency: N/A
Efficacy: 78.9 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): 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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	105294	105294	105294
5°	105122	105122	105200
10°	104262	104341	104174
15°	102228	102319	102068
20°	99165	99691	98814
25°	90002	95870	90632
30°	73874	88047	74165
35°	55536	73903	56329
40°	42289	55112	42188
45°	31593	39101	32168
50°	24054	29148	24566
55°	21686	22818	21686
60°	19801	19627	19627
65°	17994	17994	17994
70°	16740	16513	16513
75°	15496	15159	15496
80°	14114	13668	14114
85°	12227	12227	12227

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 39101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.5	6.5
10°-20°	287.0	18.2
20°-30°	394.7	25.0
30°-40°	336.0	21.3
40°-50°	202.9	12.9
50°-60°	119.6	7.6
60°-70°	78.4	5.0
70°-80°	43.5	2.8
80°-90°	12.7	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°	784.1	49.7
0°-40°	1120.1	71.0
0°-60°	1442.7	91.5
0°-90°	1577.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1577.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1087	1087	1087	1087	1087	
5°	1081	1082	1081	1080	1082	103
15°	1019	1022	1020	1019	1018	287
25°	842	868	897	870	848	381
35°	470	517	625	531	476	297
45°	231	255	285	258	235	181
55°	128	131	135	131	128	115
65°	78	79	78	78	78	79
75°	41	41	40	40	41	44
85°	11	11	11	11	11	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.9	1086.9	1086.9	1086.9	1086.9
2.5°	1087.7	1085.2	1086.1	1085.2	1086.1
5°	1081.0	1081.8	1081.0	1080.1	1081.8
7.5°	1073.4	1072.5	1072.5	1071.7	1073.4
10°	1059.9	1058.2	1060.7	1059.0	1059.0
12.5°	1041.3	1043.8	1043.0	1043.0	1041.3
15°	1019.3	1021.9	1020.2	1019.3	1017.7
17.5°	994.0	995.7	996.5	993.2	993.2
20°	961.9	965.3	967.0	961.1	958.5
22.5°	908.7	923.9	933.2	923.1	910.4
25°	842.0	868.2	896.9	869.9	847.9
27.5°	761.8	798.9	850.4	804.8	761.8
30°	660.4	715.3	787.1	721.2	663.0
32.5°	555.7	614.0	714.5	624.1	567.5
35°	469.6	516.8	624.9	531.2	476.3
37.5°	395.2	435.8	531.2	445.1	399.5
40°	334.4	366.5	435.8	370.7	333.6
42.5°	276.2	306.6	353.0	310.8	279.5
45°	230.6	255.0	285.4	257.6	234.8
47.5°	191.7	212.0	233.9	212.0	194.2
50°	159.6	175.7	193.4	175.7	163.0
52.5°	142.7	147.8	159.6	148.6	142.7
55°	128.4	130.9	135.1	130.9	128.4
57.5°	114.9	116.5	115.7	115.7	114.9
60°	102.2	103.0	101.3	102.2	101.3
62.5°	90.4	90.4	88.7	90.4	89.5
65°	78.5	79.4	78.5	78.5	78.5
67.5°	68.4	68.4	67.6	68.4	68.4
70°	59.1	59.1	58.3	59.1	58.3
72.5°	49.8	49.8	49.0	49.0	49.0
75°	41.4	41.4	40.5	40.5	41.4
77.5°	32.9	32.9	32.1	32.9	32.9
80°	25.3	25.3	24.5	25.3	25.3
82.5°	17.7	17.7	17.7	18.6	18.6
85°	11.0	11.0	11.0	11.0	11.0
87.5°	5.1	5.1	5.1	5.1	5.9
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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