

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: P837548

Luminaire Tested: HCSQ440D010-HM43040940-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837548
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: HCSQ440D010-HM43040940-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

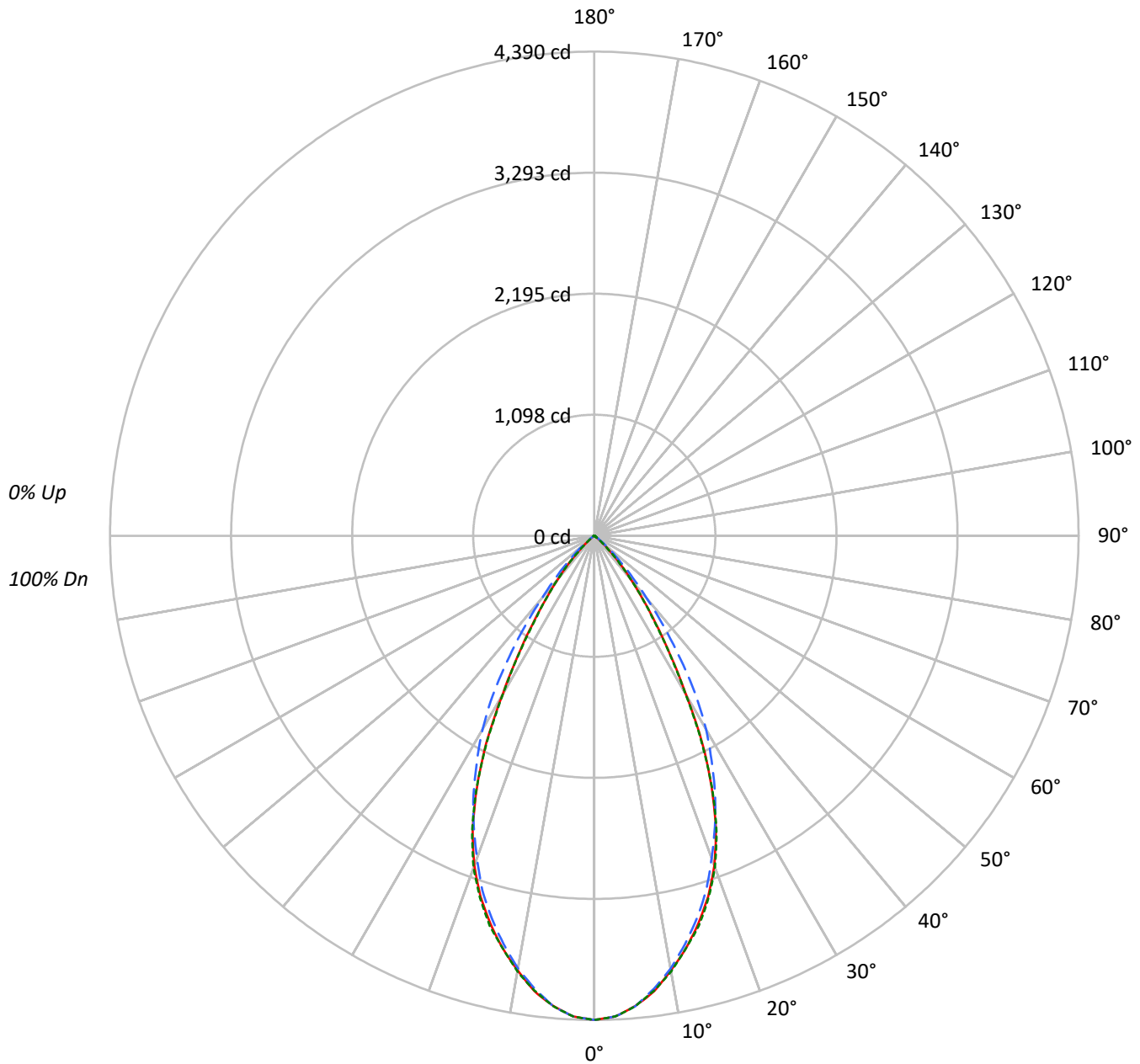
Lumens per Lamp: N/A
Luminaire Lumens: 3547.2 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): 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

TEST NUMBER: P837548

CATALOG NUMBER: HCSQ440D010-HM43040940-41SQC

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
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	114	111	108	106	111	109	106	104		105	103	101		101	99	98		97	96	95
2	108	103	99	96	106	101	98	95		98	95	93		95	93	91		93	91	89
3	103	96	91	87	101	95	90	87		92	89	85		90	87	84		88	85	83
4	98	90	85	80	96	89	84	80		87	82	79		85	81	78		83	80	77
5	93	84	79	74	91	83	78	74		82	77	73		80	76	73		78	75	72
6	88	79	73	69	87	79	73	69		77	72	68		76	71	68		74	70	68
7	84	75	69	65	82	74	68	64		73	68	64		71	67	64		70	66	63
8	80	70	64	60	79	70	64	60		69	64	60		68	63	60		67	63	60
9	76	67	61	57	75	66	60	57		65	60	56		64	60	56		63	59	56
10	73	63	57	53	72	63	57	53		62	57	53		61	56	53		60	56	53

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	425235	425235	425235
5°	416113	416288	416288
10°	393588	391837	394640
15°	365196	360192	367162
20°	327824	320474	329845
25°	269256	277059	270208
30°	186127	226375	184729
35°	114609	159903	111865
40°	64660	93493	64205
45°	29538	46855	28305
50°	7520	18794	7792
55°	3614	5709	3310
60°	2422	2073	2771
65°	2040	1628	2040
70°	1501	1501	2011
75°	1347	1347	1984
80°	2008	2008	2008
85°	2001	4001	4001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 46855 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.3	11.3
10°-20°	1008.4	28.4
20°-30°	1152.8	32.5
30°-40°	715.6	20.2
40°-50°	225.5	6.4
50°-60°	29.2	0.8
60°-70°	8.6	0.2
70°-80°	4.6	0.1
80°-90°	3.1	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°	2560.5	72.2
0°-40°	3276.1	92.4
0°-60°	3530.8	99.5
0°-90°	3547.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3547.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4390	4390	4390	4390	4390	
5°	4279	4275	4281	4277	4281	400
15°	3641	3614	3591	3614	3661	1015
25°	2519	2555	2592	2555	2528	1130
35°	969	1119	1352	1092	946	623
45°	216	258	342	260	207	182
55°	21	21	34	21	20	21
65°	9	9	7	9	9	9
75°	4	4	4	4	5	4
85°	2	4	4	4	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4389.5	4389.5	4389.5	4389.5	4389.5
2.5°	4362.7	4366.3	4362.7	4369.9	4362.7
5°	4279.0	4275.4	4280.8	4277.2	4280.8
7.5°	4165.0	4143.6	4141.8	4156.1	4157.9
10°	4001.1	3995.8	3983.3	3995.8	4011.8
12.5°	3833.7	3812.3	3794.5	3819.4	3833.7
15°	3641.3	3614.5	3591.4	3614.5	3660.9
17.5°	3429.3	3391.9	3372.3	3399.0	3443.5
20°	3179.9	3140.7	3108.6	3131.8	3199.5
22.5°	2880.6	2877.0	2855.6	2868.1	2893.1
25°	2519.0	2554.6	2592.0	2554.6	2527.9
27.5°	2121.7	2217.9	2303.4	2191.2	2105.7
30°	1663.9	1809.9	2023.7	1799.3	1651.4
32.5°	1286.2	1439.4	1712.0	1419.8	1275.5
35°	969.1	1118.7	1352.1	1092.0	945.9
37.5°	712.6	824.8	1027.9	817.7	712.6
40°	511.3	584.3	739.3	582.5	507.7
42.5°	354.5	402.6	516.6	399.0	343.8
45°	215.6	258.3	342.0	260.1	206.6
47.5°	114.0	163.9	215.6	156.8	114.0
50°	49.9	87.3	124.7	85.5	51.7
52.5°	26.7	37.4	67.7	37.4	26.7
55°	21.4	21.4	33.8	21.4	19.6
57.5°	16.0	16.0	17.8	16.0	16.0
60°	12.5	12.5	10.7	12.5	14.3
62.5°	10.7	10.7	8.9	10.7	10.7
65°	8.9	8.9	7.1	8.9	8.9
67.5°	7.1	7.1	7.1	7.1	7.1
70°	5.3	5.3	5.3	7.1	7.1
72.5°	5.3	5.3	5.3	5.3	5.3
75°	3.6	3.6	3.6	3.6	5.3
77.5°	3.6	3.6	3.6	3.6	3.6
80°	3.6	3.6	3.6	3.6	3.6
82.5°	1.8	3.6	3.6	3.6	3.6
85°	1.8	3.6	3.6	3.6	3.6
87.5°	1.8	1.8	3.6	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







(END OF REPORT)