

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: P837318

Luminaire Tested: HCSQ415D010-HM40525830-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837318
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: HCSQ415D010-HM40525830-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

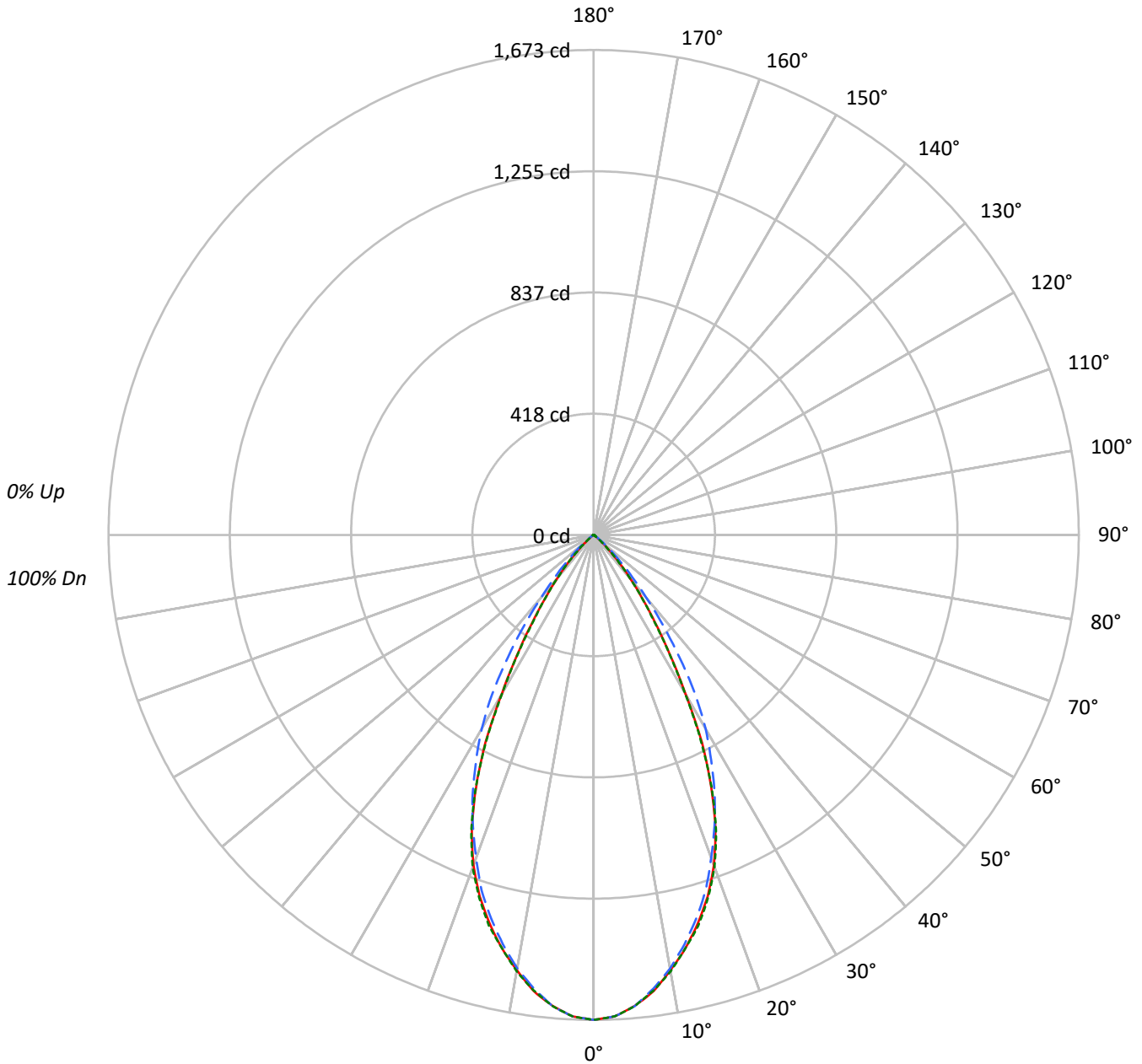
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1351.9 lumens
Efficiency: N/A
Efficacy: 96.6 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): 14
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	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°	162063	162063	162063
5°	158588	158646	158646
10°	150004	149335	150398
15°	139176	137271	139929
20°	124938	122134	125701
25°	102615	105586	102978
30°	70932	86279	70406
35°	43675	60941	42634
40°	24647	35637	24470
45°	11248	17865	10796
50°	2864	7159	2969
55°	1368	2179	1267
60°	930	794	1046
65°	779	619	779
70°	566	566	765
75°	524	524	749
80°	781	781	781
85°	778	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17865 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.2	11.3
10°-20°	384.3	28.4
20°-30°	439.3	32.5
30°-40°	272.7	20.2
40°-50°	85.9	6.4
50°-60°	11.1	0.8
60°-70°	3.3	0.2
70°-80°	1.8	0.1
80°-90°	1.2	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°	975.8	72.2
0°-40°	1248.6	92.4
0°-60°	1345.6	99.5
0°-90°	1351.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1351.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1673	1673	1673	1673	1673	
5°	1631	1629	1631	1630	1631	152
15°	1388	1378	1369	1378	1395	387
25°	960	974	988	974	963	431
35°	369	426	515	416	360	237
45°	82	98	130	99	79	69
55°	8	8	13	8	8	8
65°	3	3	3	3	3	3
75°	1	1	1	1	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1672.9	1672.9	1672.9	1672.9	1672.9
2.5°	1662.7	1664.0	1662.7	1665.4	1662.7
5°	1630.8	1629.4	1631.4	1630.1	1631.4
7.5°	1587.3	1579.2	1578.5	1583.9	1584.6
10°	1524.9	1522.8	1518.1	1522.8	1528.9
12.5°	1461.0	1452.9	1446.1	1455.6	1461.0
15°	1387.7	1377.5	1368.7	1377.5	1395.2
17.5°	1306.9	1292.7	1285.2	1295.4	1312.4
20°	1211.9	1196.9	1184.7	1193.5	1219.3
22.5°	1097.8	1096.5	1088.3	1093.1	1102.6
25°	960.0	973.6	987.8	973.6	963.4
27.5°	808.6	845.3	877.8	835.1	802.5
30°	634.1	689.8	771.3	685.7	629.4
32.5°	490.2	548.6	652.4	541.1	486.1
35°	369.3	426.4	515.3	416.2	360.5
37.5°	271.6	314.3	391.7	311.6	271.6
40°	194.9	222.7	281.8	222.0	193.5
42.5°	135.1	153.4	196.9	152.1	131.0
45°	82.1	98.4	130.4	99.1	78.8
47.5°	43.5	62.5	82.1	59.7	43.5
50°	19.0	33.3	47.5	32.6	19.7
52.5°	10.2	14.3	25.8	14.3	10.2
55°	8.1	8.1	12.9	8.1	7.5
57.5°	6.1	6.1	6.8	6.1	6.1
60°	4.8	4.8	4.1	4.8	5.4
62.5°	4.1	4.1	3.4	4.1	4.1
65°	3.4	3.4	2.7	3.4	3.4
67.5°	2.7	2.7	2.7	2.7	2.7
70°	2.0	2.0	2.0	2.7	2.7
72.5°	2.0	2.0	2.0	2.0	2.0
75°	1.4	1.4	1.4	1.4	2.0
77.5°	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4
82.5°	0.7	1.4	1.4	1.4	1.4
85°	0.7	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	1.4	1.4	1.4
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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