

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: P837338

Luminaire Tested: HCSQ415D010-HM40525930-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837338
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-HM40525930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

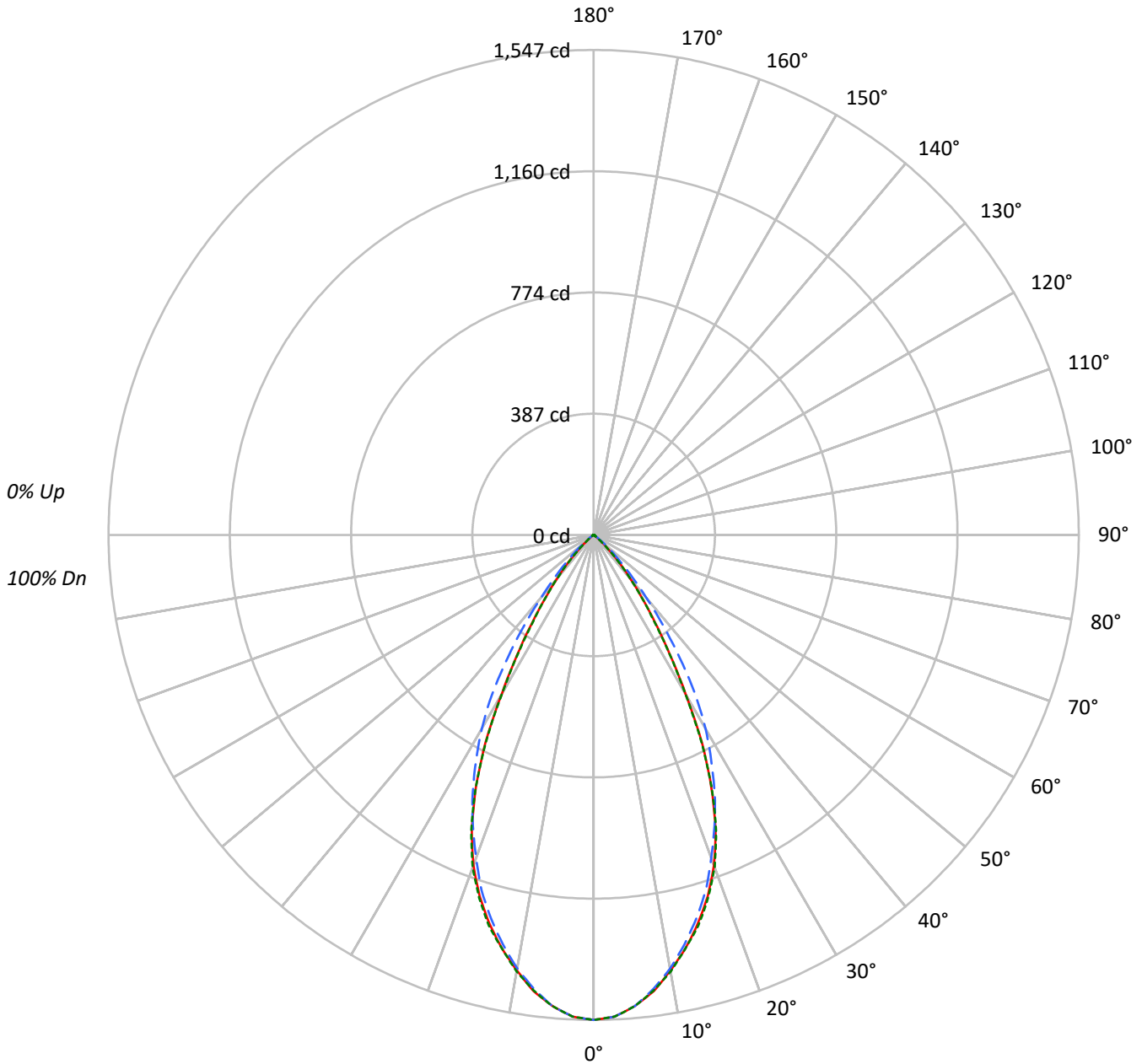
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1250.5 lumens
Efficiency: N/A
Efficacy: 89.3 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	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°	149895	149895	149895
5°	146685	146743	146743
10°	138741	138121	139115
15°	128736	126971	129428
20°	115557	112969	116268
25°	94919	97666	95250
30°	65607	79802	65115
35°	40399	56364	39441
40°	22788	32956	22637
45°	10412	16523	9974
50°	2653	6631	2743
55°	1267	2010	1165
60°	853	736	969
65°	711	573	711
70°	538	538	708
75°	487	487	711
80°	725	725	725
85°	667	1445	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16523 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	11.3
10°-20°	355.5	28.4
20°-30°	406.4	32.5
30°-40°	252.3	20.2
40°-50°	79.5	6.4
50°-60°	10.3	0.8
60°-70°	3.0	0.2
70°-80°	1.7	0.1
80°-90°	1.1	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°	902.6	72.2
0°-40°	1154.9	92.4
0°-60°	1244.7	99.5
0°-90°	1250.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1250.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1547	1547	1547	1547	1547	
5°	1508	1507	1509	1508	1509	141
15°	1284	1274	1266	1274	1290	358
25°	888	900	914	900	891	398
35°	342	394	477	385	334	220
45°	76	91	121	92	73	64
55°	8	8	12	8	7	7
65°	3	3	2	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°	1547.3	1547.3	1547.3	1547.3	1547.3
2.5°	1537.9	1539.2	1537.9	1540.4	1537.9
5°	1508.4	1507.1	1509.0	1507.8	1509.0
7.5°	1468.2	1460.7	1460.0	1465.1	1465.7
10°	1410.4	1408.5	1404.1	1408.5	1414.2
12.5°	1351.4	1343.9	1337.6	1346.4	1351.4
15°	1283.6	1274.2	1266.0	1274.2	1290.5
17.5°	1208.8	1195.7	1188.8	1198.2	1213.9
20°	1120.9	1107.1	1095.8	1104.0	1127.8
22.5°	1015.4	1014.2	1006.6	1011.0	1019.8
25°	888.0	900.5	913.7	900.5	891.1
27.5°	747.9	781.8	812.0	772.4	742.3
30°	586.5	638.0	713.4	634.3	582.1
32.5°	453.4	507.4	603.5	500.5	449.6
35°	341.6	394.4	476.6	384.9	333.5
37.5°	251.2	290.8	362.3	288.2	251.2
40°	180.2	206.0	260.6	205.3	179.0
42.5°	125.0	141.9	182.1	140.7	121.2
45°	76.0	91.1	120.6	91.7	72.8
47.5°	40.2	57.8	76.0	55.3	40.2
50°	17.6	30.8	44.0	30.1	18.2
52.5°	9.4	13.2	23.9	13.2	9.4
55°	7.5	7.5	11.9	7.5	6.9
57.5°	5.7	5.7	6.3	5.7	5.7
60°	4.4	4.4	3.8	4.4	5.0
62.5°	3.8	3.8	3.1	3.8	3.8
65°	3.1	3.1	2.5	3.1	3.1
67.5°	2.5	2.5	2.5	2.5	2.5
70°	1.9	1.9	1.9	2.5	2.5
72.5°	1.9	1.9	1.9	1.9	1.9
75°	1.3	1.3	1.3	1.3	1.9
77.5°	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3
82.5°	0.6	1.3	1.3	1.3	1.3
85°	0.6	1.3	1.3	1.3	1.3
87.5°	0.6	0.6	1.3	1.3	1.3
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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