

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837658

Luminaire Tested: HCSQ455D010-HM44560930-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837658
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: HCSQ455D010-HM44560930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

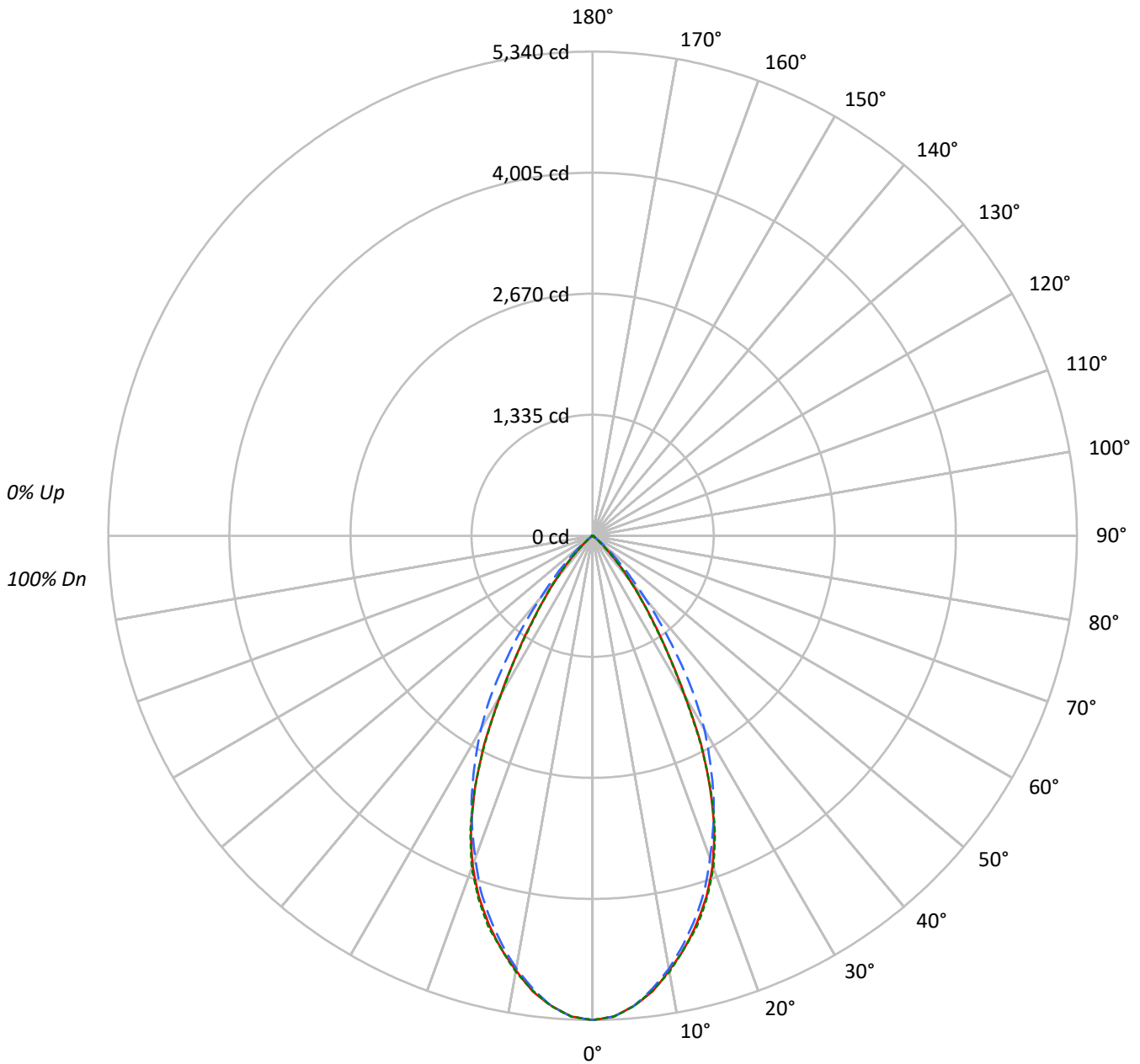
Lumens per Lamp: N/A
Luminaire Lumens: 4315.5 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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°	517354	517354	517354
5°	506260	506464	506464
10°	478855	476720	480134
15°	444307	438219	446694
20°	398835	389897	401299
25°	327576	337078	328741
30°	226442	275416	224742
35°	139432	194543	136109
40°	78659	113752	78116
45°	35922	57007	34442
50°	9148	22863	9480
55°	4391	6959	4020
60°	2945	2519	3352
65°	2476	1994	2476
70°	1841	1841	2464
75°	1609	1609	2433
80°	2399	2399	2399
85°	2445	4780	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 57007 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.8	11.3
10°-20°	1226.9	28.4
20°-30°	1402.5	32.5
30°-40°	870.6	20.2
40°-50°	274.3	6.4
50°-60°	35.5	0.8
60°-70°	10.5	0.2
70°-80°	5.6	0.1
80°-90°	3.7	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°	3115.2	72.2
0°-40°	3985.8	92.4
0°-60°	4295.7	99.5
0°-90°	4315.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4315.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5340	5340	5340	5340	5340	
5°	5206	5202	5208	5204	5208	487
15°	4430	4398	4369	4398	4454	1235
25°	3065	3108	3154	3108	3076	1375
35°	1179	1361	1645	1329	1151	758
45°	262	314	416	316	251	221
55°	26	26	41	26	24	26
65°	11	11	9	11	11	11
75°	4	4	4	4	6	5
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°	5340.4	5340.4	5340.4	5340.4	5340.4
2.5°	5307.8	5312.2	5307.8	5316.5	5307.8
5°	5206.0	5201.6	5208.1	5203.8	5208.1
7.5°	5067.3	5041.3	5039.1	5056.4	5058.6
10°	4867.9	4861.4	4846.2	4861.4	4880.9
12.5°	4664.1	4638.1	4616.5	4646.8	4664.1
15°	4430.1	4397.6	4369.4	4397.6	4453.9
17.5°	4172.2	4126.6	4102.8	4135.3	4189.5
20°	3868.7	3821.0	3782.0	3810.2	3892.6
22.5°	3504.6	3500.3	3474.3	3489.4	3519.8
25°	3064.6	3108.0	3153.5	3108.0	3075.5
27.5°	2581.3	2698.4	2802.4	2665.8	2561.8
30°	2024.3	2202.0	2462.1	2189.0	2009.1
32.5°	1564.8	1751.2	2082.8	1727.4	1551.8
35°	1179.0	1361.1	1645.0	1328.6	1150.9
37.5°	866.9	1003.5	1250.6	994.8	866.9
40°	622.0	710.9	899.5	708.7	617.7
42.5°	431.3	489.8	628.5	485.5	418.3
45°	262.2	314.3	416.1	316.4	251.4
47.5°	138.7	199.4	262.2	190.7	138.7
50°	60.7	106.2	151.7	104.0	62.9
52.5°	32.5	45.5	82.4	45.5	32.5
55°	26.0	26.0	41.2	26.0	23.8
57.5°	19.5	19.5	21.7	19.5	19.5
60°	15.2	15.2	13.0	15.2	17.3
62.5°	13.0	13.0	10.8	13.0	13.0
65°	10.8	10.8	8.7	10.8	10.8
67.5°	8.7	8.7	8.7	8.7	8.7
70°	6.5	6.5	6.5	8.7	8.7
72.5°	6.5	6.5	6.5	6.5	6.5
75°	4.3	4.3	4.3	4.3	6.5
77.5°	4.3	4.3	4.3	4.3	4.3
80°	4.3	4.3	4.3	4.3	4.3
82.5°	2.2	4.3	4.3	4.3	4.3
85°	2.2	4.3	4.3	4.3	4.3
87.5°	2.2	2.2	4.3	4.3	4.3
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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