

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: P837568

Luminaire Tested: HCSQ445D010-HM44560840-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837568
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: HCSQ445D010-HM44560840-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

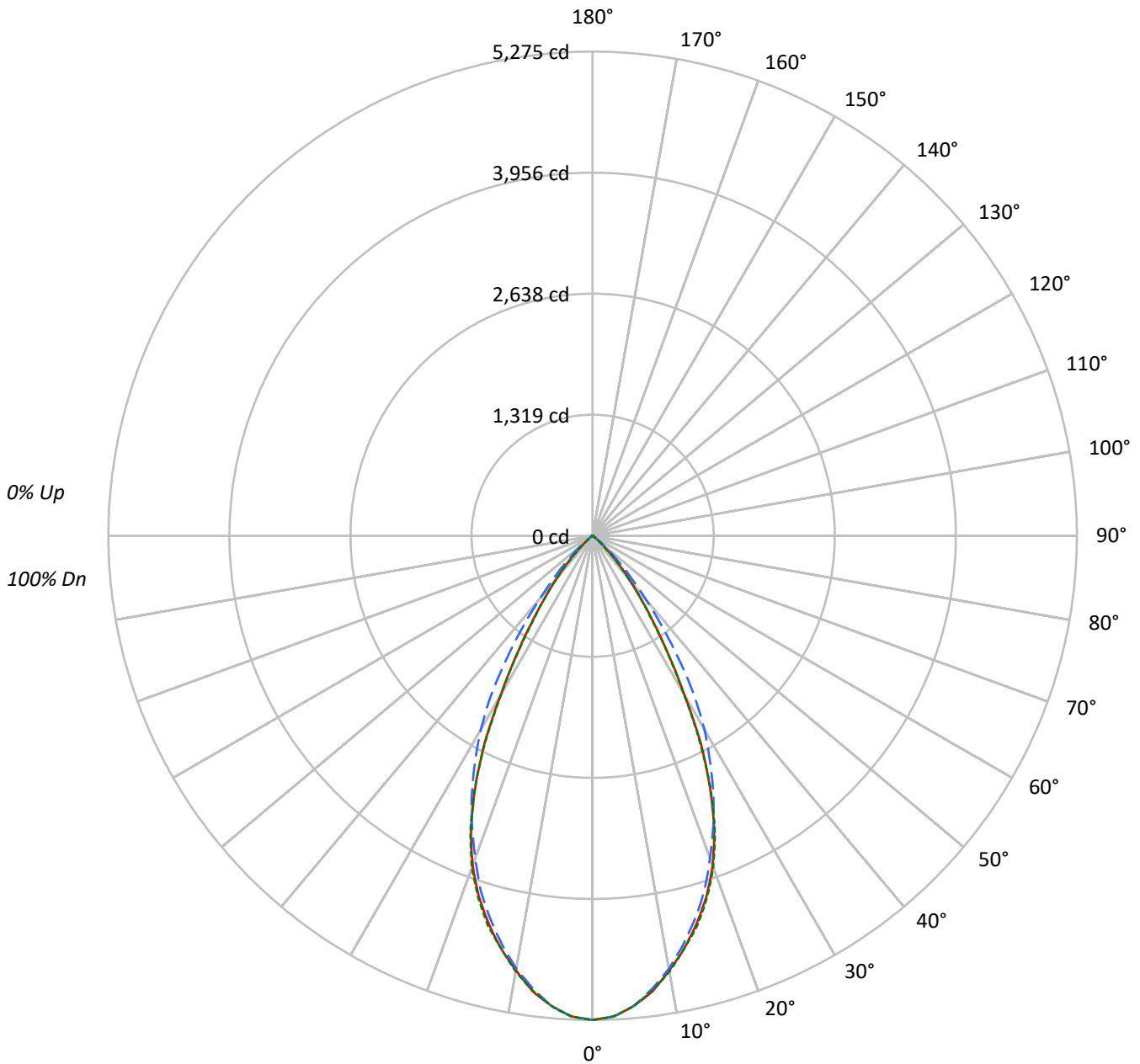
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4262.5 lumens
Efficiency: N/A
Efficacy: 92.9 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): 45.9
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°	510979	510979	510979
5°	500027	500231	500231
10°	472962	470857	474222
15°	438831	432824	441198
20°	393927	385103	396360
25°	323546	332931	324690
30°	223657	272026	221979
35°	137717	192154	134430
40°	77698	112349	77154
45°	35484	56308	34018
50°	9028	22577	9359
55°	4341	6874	3969
60°	2906	2480	3313
65°	2453	1971	2453
70°	1813	1813	2436
75°	1609	1609	2396
80°	2399	2399	2399
85°	2334	4780	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 56308 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	479.8	11.3
10°-20°	1211.8	28.4
20°-30°	1385.3	32.5
30°-40°	859.9	20.2
40°-50°	271.0	6.4
50°-60°	35.1	0.8
60°-70°	10.4	0.2
70°-80°	5.5	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°	3076.9	72.2
0°-40°	3936.8	92.4
0°-60°	4242.8	99.5
0°-90°	4262.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4262.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5275	5275	5275	5275	5275	
5°	5142	5138	5144	5140	5144	481
15°	4376	4343	4316	4343	4399	1220
25°	3027	3070	3115	3070	3038	1358
35°	1164	1344	1625	1312	1137	748
45°	259	310	411	312	248	218
55°	26	26	41	26	24	25
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°	5274.6	5274.6	5274.6	5274.6	5274.6
2.5°	5242.5	5246.8	5242.5	5251.1	5242.5
5°	5141.9	5137.6	5144.0	5139.8	5144.0
7.5°	5004.9	4979.2	4977.1	4994.2	4996.3
10°	4808.0	4801.5	4786.6	4801.5	4820.8
12.5°	4606.7	4581.1	4559.6	4589.6	4606.7
15°	4375.5	4343.4	4315.6	4343.4	4399.1
17.5°	4120.8	4075.9	4052.3	4084.4	4137.9
20°	3821.1	3774.0	3735.5	3763.3	3844.7
22.5°	3461.5	3457.2	3431.5	3446.5	3476.5
25°	3026.9	3069.7	3114.7	3069.7	3037.6
27.5°	2549.5	2665.1	2767.9	2633.0	2530.3
30°	1999.4	2174.9	2431.8	2162.1	1984.4
32.5°	1545.6	1729.7	2057.2	1706.1	1532.7
35°	1164.5	1344.3	1624.8	1312.2	1136.7
37.5°	856.3	991.1	1235.2	982.6	856.3
40°	614.4	702.1	888.4	700.0	610.1
42.5°	426.0	483.8	620.8	479.5	413.2
45°	259.0	310.4	411.0	312.5	248.3
47.5°	137.0	196.9	259.0	188.4	137.0
50°	59.9	104.9	149.8	102.8	62.1
52.5°	32.1	45.0	81.3	45.0	32.1
55°	25.7	25.7	40.7	25.7	23.5
57.5°	19.3	19.3	21.4	19.3	19.3
60°	15.0	15.0	12.8	15.0	17.1
62.5°	12.8	12.8	10.7	12.8	12.8
65°	10.7	10.7	8.6	10.7	10.7
67.5°	8.6	8.6	8.6	8.6	8.6
70°	6.4	6.4	6.4	8.6	8.6
72.5°	6.4	6.4	6.4	6.4	6.4
75°	4.3	4.3	4.3	4.3	6.4
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°	2.1	4.3	4.3	4.3	4.3
85°	2.1	4.3	4.3	4.3	4.3
87.5°	2.1	2.1	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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