

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: P837653

Luminaire Tested: HCSQ455D010-HM44560927-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837653
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-HM44560927-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

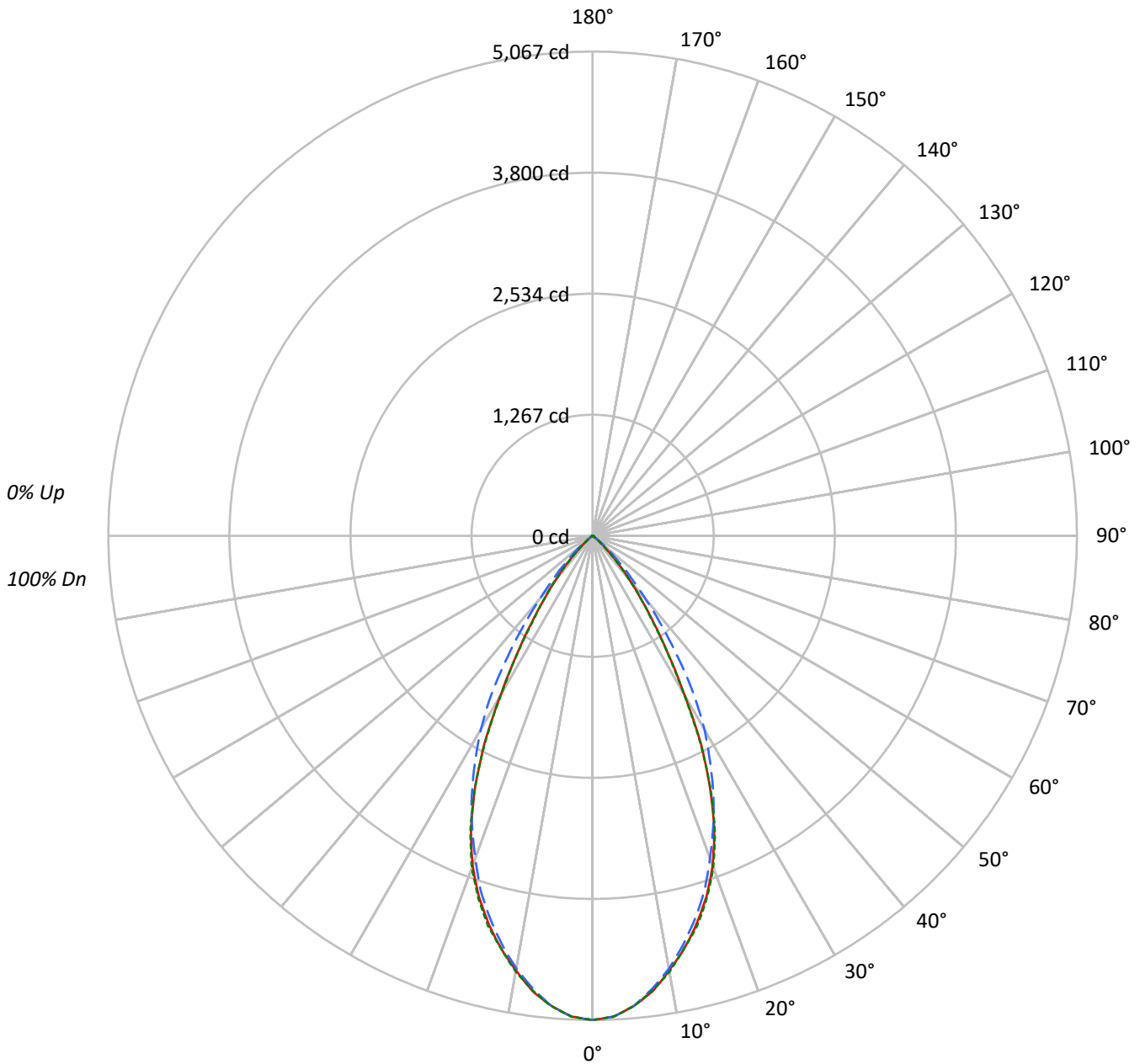
Lumens per Lamp: N/A
Luminaire Lumens: 4094.9 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	100	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	76	76		
	5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71	71	71	71	71	71		
	6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66	66	66	66	66	66		
	7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	62	62		
	8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58	58	58	58	58	58		
	9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	55	55		
	10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	52	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	490887	490887	490887
5°	480363	480568	480568
10°	454361	452334	455571
15°	421581	415804	423848
20°	378443	369958	380773
25°	310826	319837	311927
30°	214865	261332	213254
35°	132301	184597	129143
40°	74638	107923	74119
45°	34086	54089	32689
50°	8681	21702	8982
55°	4172	6604	3817
60°	2790	2383	3197
65°	2361	1880	2361
70°	1756	1756	2323
75°	1535	1535	2321
80°	2287	2287	2287
85°	2334	4557	4557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 54089 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.0	11.3
10°-20°	1164.1	28.4
20°-30°	1330.8	32.5
30°-40°	826.1	20.2
40°-50°	260.3	6.4
50°-60°	33.7	0.8
60°-70°	10.0	0.2
70°-80°	5.3	0.1
80°-90°	3.6	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°	2955.9	72.2
0°-40°	3782.0	92.4
0°-60°	4076.0	99.5
0°-90°	4094.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4094.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5067	5067	5067	5067	5067	
5°	4940	4936	4942	4938	4942	462
15°	4204	4173	4146	4173	4226	1172
25°	2908	2949	2992	2949	2918	1305
35°	1119	1292	1561	1261	1092	719
45°	249	298	395	300	239	210
55°	25	25	39	25	23	24
65°	10	10	8	10	10	10
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°	5067.2	5067.2	5067.2	5067.2	5067.2
2.5°	5036.4	5040.5	5036.4	5044.6	5036.4
5°	4939.7	4935.6	4941.8	4937.7	4941.8
7.5°	4808.1	4783.4	4781.4	4797.8	4799.9
10°	4618.9	4612.7	4598.3	4612.7	4631.2
12.5°	4425.6	4400.9	4380.3	4409.1	4425.6
15°	4203.5	4172.6	4145.9	4172.6	4226.1
17.5°	3958.8	3915.6	3893.0	3923.8	3975.2
20°	3670.9	3625.6	3588.6	3615.3	3693.5
22.5°	3325.4	3321.2	3296.6	3311.0	3339.8
25°	2907.9	2949.0	2992.2	2949.0	2918.2
27.5°	2449.3	2560.3	2659.1	2529.5	2430.8
30°	1920.8	2089.4	2336.2	2077.1	1906.4
32.5°	1484.8	1661.7	1976.3	1639.0	1472.5
35°	1118.7	1291.5	1560.9	1260.6	1092.0
37.5°	822.6	952.2	1186.6	943.9	822.6
40°	590.2	674.5	853.4	672.5	586.1
42.5°	409.2	464.8	596.4	460.7	396.9
45°	248.8	298.2	394.8	300.2	238.6
47.5°	131.6	189.2	248.8	181.0	131.6
50°	57.6	100.8	144.0	98.7	59.6
52.5°	30.8	43.2	78.1	43.2	30.8
55°	24.7	24.7	39.1	24.7	22.6
57.5°	18.5	18.5	20.6	18.5	18.5
60°	14.4	14.4	12.3	14.4	16.5
62.5°	12.3	12.3	10.3	12.3	12.3
65°	10.3	10.3	8.2	10.3	10.3
67.5°	8.2	8.2	8.2	8.2	8.2
70°	6.2	6.2	6.2	8.2	8.2
72.5°	6.2	6.2	6.2	6.2	6.2
75°	4.1	4.1	4.1	4.1	6.2
77.5°	4.1	4.1	4.1	4.1	4.1
80°	4.1	4.1	4.1	4.1	4.1
82.5°	2.1	4.1	4.1	4.1	4.1
85°	2.1	4.1	4.1	4.1	4.1
87.5°	2.1	2.1	4.1	4.1	4.1
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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