

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: P837579

Luminaire Tested: HCSQ445D010-HM44560930-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837579
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ445D010-HM44560930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

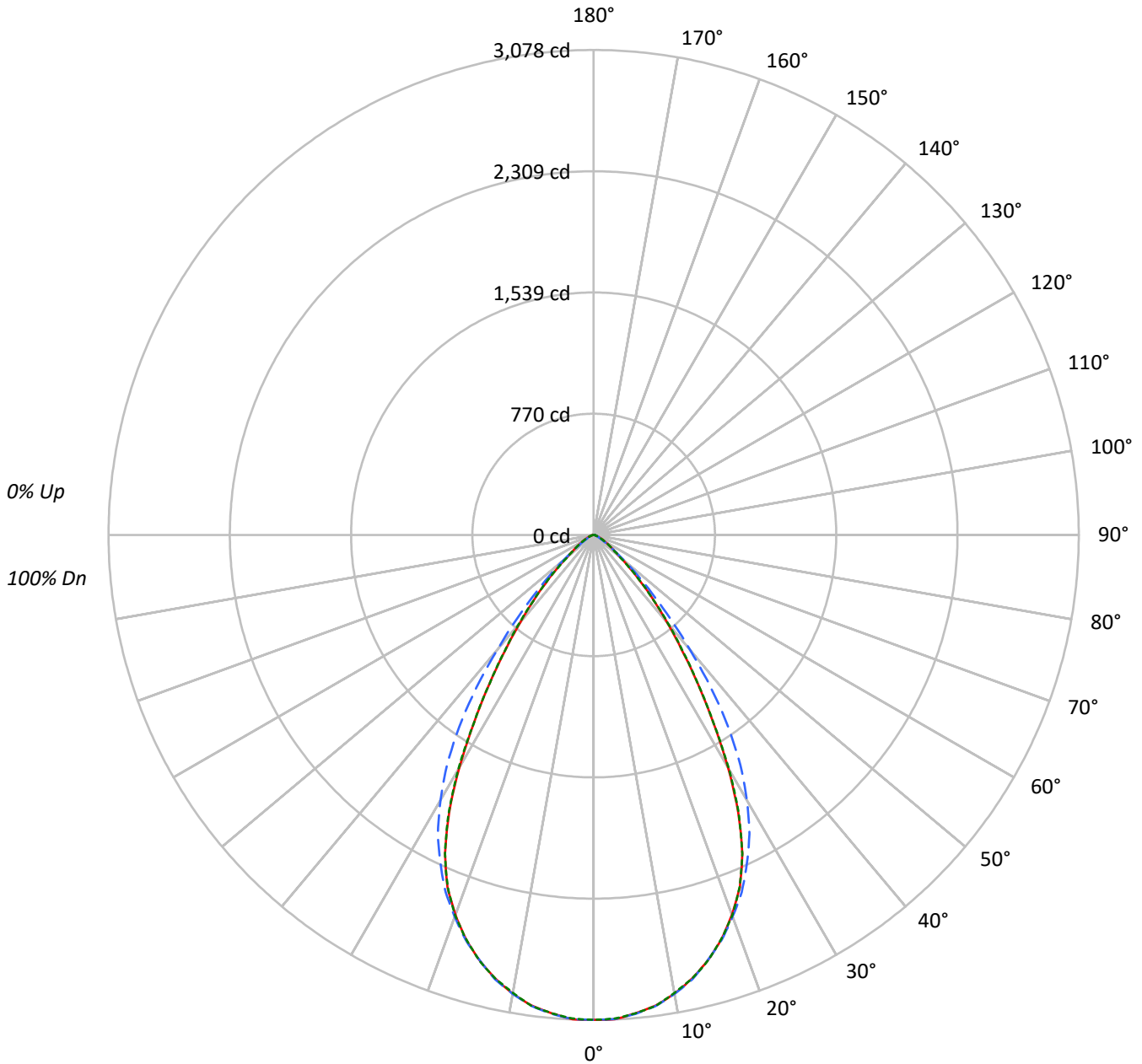
Lumens per Lamp: N/A
Luminaire Lumens: 3460.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92																			
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85																			
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77																			
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71																			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65																			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60																			
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56																			
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52																			
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48																			
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	298192	298192	298192
5°	296375	296745	296375
10°	290821	291008	290260
15°	280489	280298	280679
20°	264412	265783	265000
25°	238579	245901	238579
30°	190557	217572	192045
35°	136026	176058	136251
40°	91849	119734	93291
45°	58349	70844	58610
50°	33232	37829	32086
55°	21838	18308	21517
60°	15113	10676	14725
65°	10453	7840	10453
70°	7534	5920	7534
75°	4978	4978	4978
80°	3180	4240	4240
85°	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 70844 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.4	8.3
10°-20°	784.1	22.7
20°-30°	1026.6	29.7
30°-40°	806.9	23.3
40°-50°	376.9	10.9
50°-60°	116.8	3.4
60°-70°	41.7	1.2
70°-80°	14.7	0.4
80°-90°	4.0	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°	2099.1	60.7
0°-40°	2906.0	84.0
0°-60°	3399.7	98.3
0°-90°	3460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3460.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3078	3078	3078	3078	3078	
5°	3048	3050	3052	3055	3048	288
15°	2797	2797	2795	2797	2799	783
25°	2232	2262	2300	2264	2232	1004
35°	1150	1255	1489	1270	1152	725
45°	426	477	517	468	428	339
55°	129	122	108	120	127	121
65°	46	42	34	40	46	48
75°	13	13	13	13	13	15
85°	4	4	4	4	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3078.1	3078.1	3078.1	3078.1	3078.1
2.5°	3078.1	3074.3	3076.2	3072.4	3072.4
5°	3047.7	3049.6	3051.5	3055.3	3047.7
7.5°	3013.5	3017.3	3015.4	3015.4	3015.4
10°	2956.4	2958.3	2958.3	2958.3	2950.7
12.5°	2884.2	2888.0	2889.9	2884.2	2884.2
15°	2796.7	2796.7	2794.8	2796.7	2798.6
17.5°	2692.1	2697.9	2697.9	2692.1	2690.2
20°	2564.8	2574.3	2578.1	2570.5	2570.5
22.5°	2422.2	2431.7	2454.5	2435.5	2420.3
25°	2232.0	2262.5	2300.5	2264.4	2232.0
27.5°	1986.8	2053.3	2140.8	2064.7	1992.5
30°	1703.5	1811.9	1945.0	1817.6	1716.8
32.5°	1414.5	1536.2	1732.0	1545.7	1414.5
35°	1150.2	1254.8	1488.7	1270.0	1152.1
37.5°	914.5	1015.3	1220.6	1026.7	927.8
40°	726.3	808.0	946.8	806.1	737.7
42.5°	566.6	625.5	716.8	623.6	564.7
45°	425.9	477.2	517.1	467.7	427.8
47.5°	313.7	347.9	370.7	342.2	306.1
50°	220.5	245.3	251.0	239.6	212.9
52.5°	165.4	165.4	167.3	163.5	161.6
55°	129.3	121.7	108.4	119.8	127.4
57.5°	100.8	93.2	76.0	89.4	98.9
60°	78.0	70.3	55.1	68.4	76.0
62.5°	60.8	53.2	43.7	53.2	58.9
65°	45.6	41.8	34.2	39.9	45.6
67.5°	34.2	30.4	26.6	30.4	34.2
70°	26.6	24.7	20.9	22.8	26.6
72.5°	19.0	17.1	17.1	17.1	19.0
75°	13.3	13.3	13.3	13.3	13.3
77.5°	9.5	9.5	9.5	9.5	9.5
80°	5.7	5.7	7.6	7.6	7.6
82.5°	3.8	3.8	5.7	5.7	5.7
85°	3.8	3.8	3.8	3.8	3.8
87.5°	1.9	1.9	1.9	3.8	3.8
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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