

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: P837689

Luminaire Tested: HCSQ460D010-HM44560840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837689
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: HCSQ460D010-HM44560840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

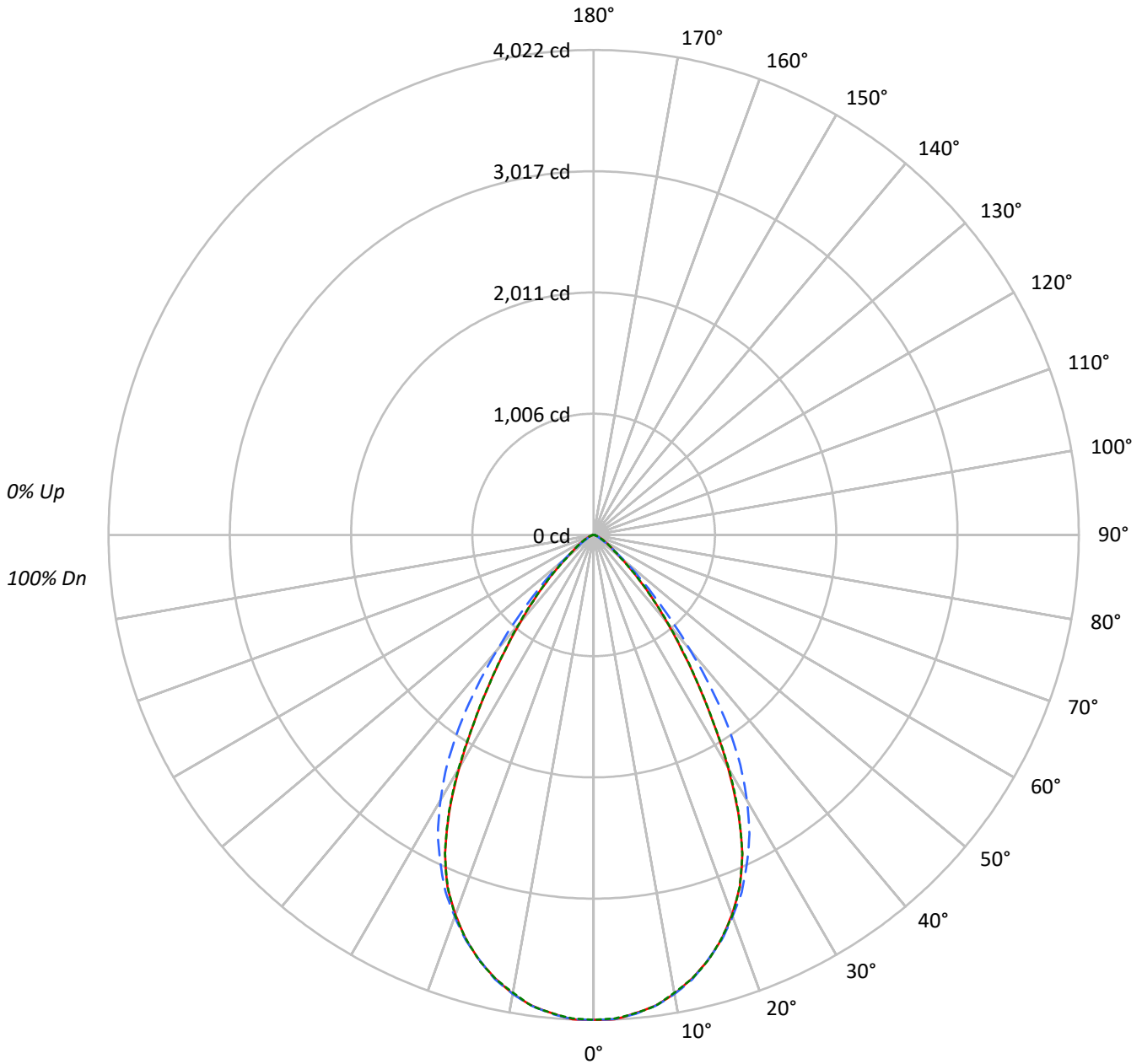
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4520.7 lumens
Efficiency: N/A
Efficacy: 80.7 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): 56
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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CATALOG NUMBER: HCSQ460D010-HM44560840-41SQH

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			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85					85			
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77					77			
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60					60			
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56					56			
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52					52			
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48					48			
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	389594	389594	389594
5°	387222	387708	387222
10°	379973	380209	379236
15°	366470	366219	366721
20°	345464	347247	346226
25°	311713	321280	311713
30°	248971	284264	250918
35°	177726	230022	178021
40°	120000	156433	121884
45°	76228	92573	76571
50°	43420	49418	41928
55°	28527	23916	28104
60°	19724	13950	19259
65°	13662	10246	13662
70°	9857	7733	9857
75°	6513	6513	6513
80°	4184	5523	5523
85°	5558	5558	5558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 92573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.8	8.3
10°-20°	1024.5	22.7
20°-30°	1341.3	29.7
30°-40°	1054.2	23.3
40°-50°	492.4	10.9
50°-60°	152.6	3.4
60°-70°	54.5	1.2
70°-80°	19.2	0.4
80°-90°	5.3	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°	2742.5	60.7
0°-40°	3796.8	84.0
0°-60°	4441.8	98.3
0°-90°	4520.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4520.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4022	4022	4022	4022	4022	
5°	3982	3984	3987	3992	3982	377
15°	3654	3654	3652	3654	3656	1024
25°	2916	2956	3006	2958	2916	1311
35°	1503	1640	1945	1659	1505	947
45°	556	624	676	611	559	443
55°	169	159	142	156	166	158
65°	60	55	45	52	60	62
75°	17	17	17	17	17	20
85°	5	5	5	5	5	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4021.6	4021.6	4021.6	4021.6	4021.6
2.5°	4021.6	4016.7	4019.2	4014.2	4014.2
5°	3981.9	3984.4	3986.9	3991.8	3981.9
7.5°	3937.2	3942.2	3939.7	3939.7	3939.7
10°	3862.7	3865.1	3865.1	3865.1	3855.2
12.5°	3768.3	3773.2	3775.7	3768.3	3768.3
15°	3654.0	3654.0	3651.5	3654.0	3656.5
17.5°	3517.4	3524.8	3524.8	3517.4	3514.9
20°	3351.0	3363.4	3368.3	3358.4	3358.4
22.5°	3164.7	3177.1	3206.9	3182.0	3162.2
25°	2916.2	2956.0	3005.7	2958.5	2916.2
27.5°	2595.8	2682.8	2797.0	2697.7	2603.3
30°	2225.7	2367.3	2541.2	2374.7	2243.1
32.5°	1848.1	2007.1	2262.9	2019.5	1848.1
35°	1502.8	1639.5	1945.0	1659.3	1505.3
37.5°	1194.8	1326.5	1594.7	1341.4	1212.2
40°	948.9	1055.7	1237.0	1053.2	963.8
42.5°	740.2	817.2	936.5	814.8	737.8
45°	556.4	623.5	675.7	611.1	558.9
47.5°	409.9	454.6	484.4	447.1	399.9
50°	288.1	320.4	327.9	313.0	278.2
52.5°	216.1	216.1	218.6	213.6	211.1
55°	168.9	159.0	141.6	156.5	166.4
57.5°	131.7	121.7	99.4	116.7	129.2
60°	101.8	91.9	72.0	89.4	99.4
62.5°	79.5	69.6	57.1	69.6	77.0
65°	59.6	54.6	44.7	52.2	59.6
67.5°	44.7	39.7	34.8	39.7	44.7
70°	34.8	32.3	27.3	29.8	34.8
72.5°	24.8	22.4	22.4	22.4	24.8
75°	17.4	17.4	17.4	17.4	17.4
77.5°	12.4	12.4	12.4	12.4	12.4
80°	7.5	7.5	9.9	9.9	9.9
82.5°	5.0	5.0	7.5	7.5	7.5
85°	5.0	5.0	5.0	5.0	5.0
87.5°	2.5	2.5	2.5	5.0	5.0
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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