

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: P837224

Luminaire Tested: HCSQ405D010-HM40525935-41SQH

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837224
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: HCSQ405D010-HM40525935-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

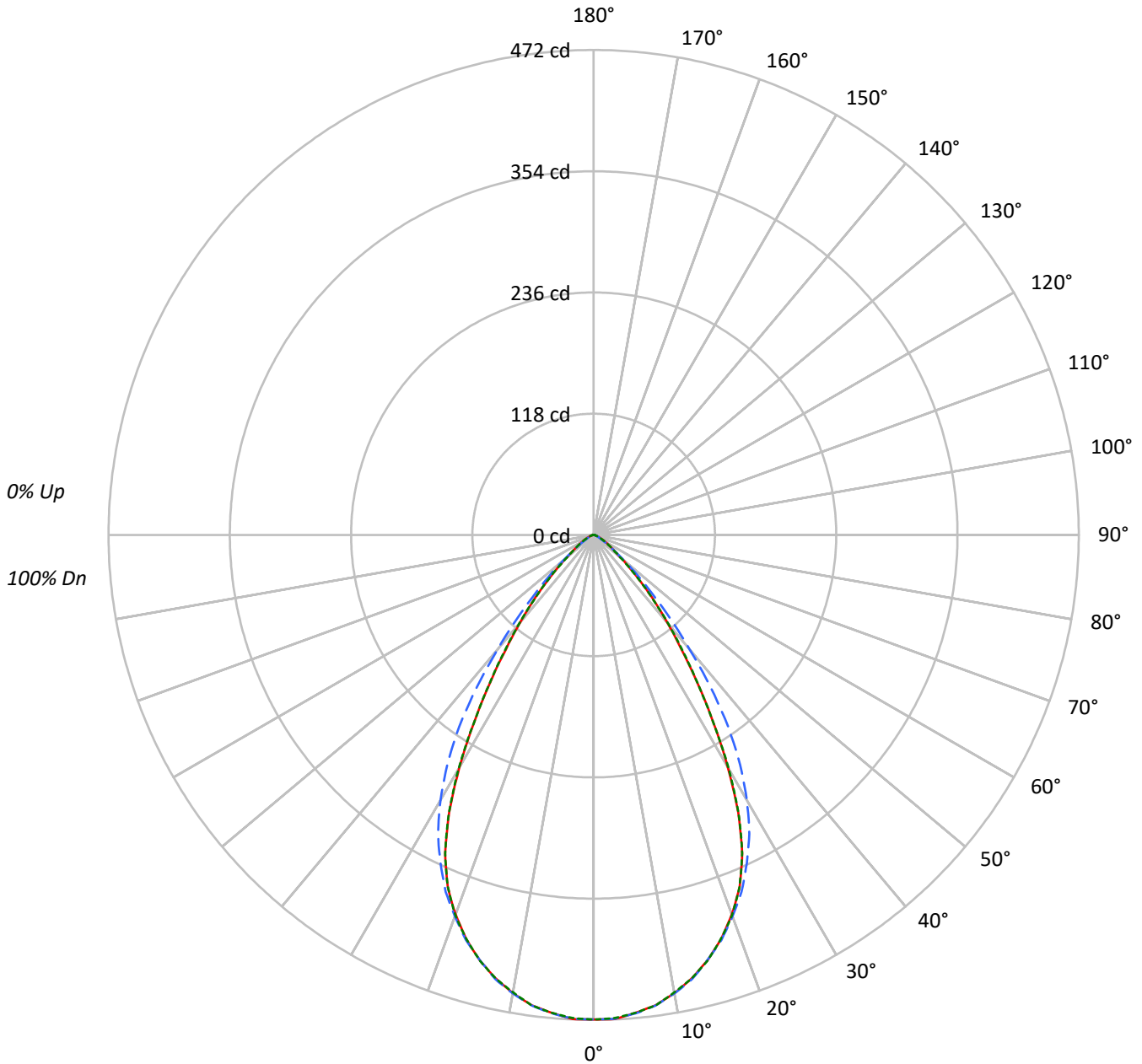
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 530.1 lumens
Efficiency: N/A
Efficacy: 88.3 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): 6
Input Voltage (V): NR
Input Current (Ain): 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			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	54	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	45686	45686	45686
5°	45404	45462	45404
10°	44552	44581	44463
15°	42965	42945	42996
20°	40505	40722	40598
25°	36546	37668	36546
30°	29196	33335	29420
35°	20838	26976	20873
40°	14075	18337	14290
45°	8933	10851	8974
50°	5094	5787	4913
55°	3344	2804	3293
60°	2306	1628	2267
65°	1605	1192	1605
70°	1161	906	1161
75°	749	749	749
80°	502	669	669
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10851 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	8.3
10°-20°	120.1	22.7
20°-30°	157.3	29.7
30°-40°	123.6	23.3
40°-50°	57.7	10.9
50°-60°	17.9	3.4
60°-70°	6.4	1.2
70°-80°	2.2	0.4
80°-90°	0.6	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°	321.6	60.7
0°-40°	445.2	84.0
0°-60°	520.8	98.2
0°-90°	530.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	530.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	467	467	468	468	467	44
15°	428	428	428	428	429	120
25°	342	347	352	347	342	154
35°	176	192	228	195	176	111
45°	65	73	79	72	66	52
55°	20	19	17	18	20	19
65°	7	6	5	6	7	7
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	471.6	471.6	471.6	471.6	471.6
2.5°	471.6	471.0	471.3	470.7	470.7
5°	466.9	467.2	467.5	468.1	466.9
7.5°	461.7	462.2	461.9	461.9	461.9
10°	452.9	453.2	453.2	453.2	452.0
12.5°	441.8	442.4	442.7	441.8	441.8
15°	428.4	428.4	428.2	428.4	428.7
17.5°	412.4	413.3	413.3	412.4	412.1
20°	392.9	394.4	395.0	393.8	393.8
22.5°	371.1	372.5	376.0	373.1	370.8
25°	341.9	346.6	352.4	346.9	341.9
27.5°	304.4	314.6	328.0	316.3	305.2
30°	261.0	277.6	298.0	278.4	263.0
32.5°	216.7	235.3	265.3	236.8	216.7
35°	176.2	192.2	228.1	194.6	176.5
37.5°	140.1	155.5	187.0	157.3	142.1
40°	111.3	123.8	145.0	123.5	113.0
42.5°	86.8	95.8	109.8	95.5	86.5
45°	65.2	73.1	79.2	71.7	65.5
47.5°	48.1	53.3	56.8	52.4	46.9
50°	33.8	37.6	38.4	36.7	32.6
52.5°	25.3	25.3	25.6	25.0	24.8
55°	19.8	18.6	16.6	18.3	19.5
57.5°	15.4	14.3	11.7	13.7	15.1
60°	11.9	10.8	8.4	10.5	11.7
62.5°	9.3	8.2	6.7	8.2	9.0
65°	7.0	6.4	5.2	6.1	7.0
67.5°	5.2	4.7	4.1	4.7	5.2
70°	4.1	3.8	3.2	3.5	4.1
72.5°	2.9	2.6	2.6	2.6	2.9
75°	2.0	2.0	2.0	2.0	2.0
77.5°	1.5	1.5	1.5	1.5	1.5
80°	0.9	0.9	1.2	1.2	1.2
82.5°	0.6	0.6	0.9	0.9	0.9
85°	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.3	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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