

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: P837251

Luminaire Tested: HCSQ407D010-HM40525840-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837251
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ407D010-HM40525840-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

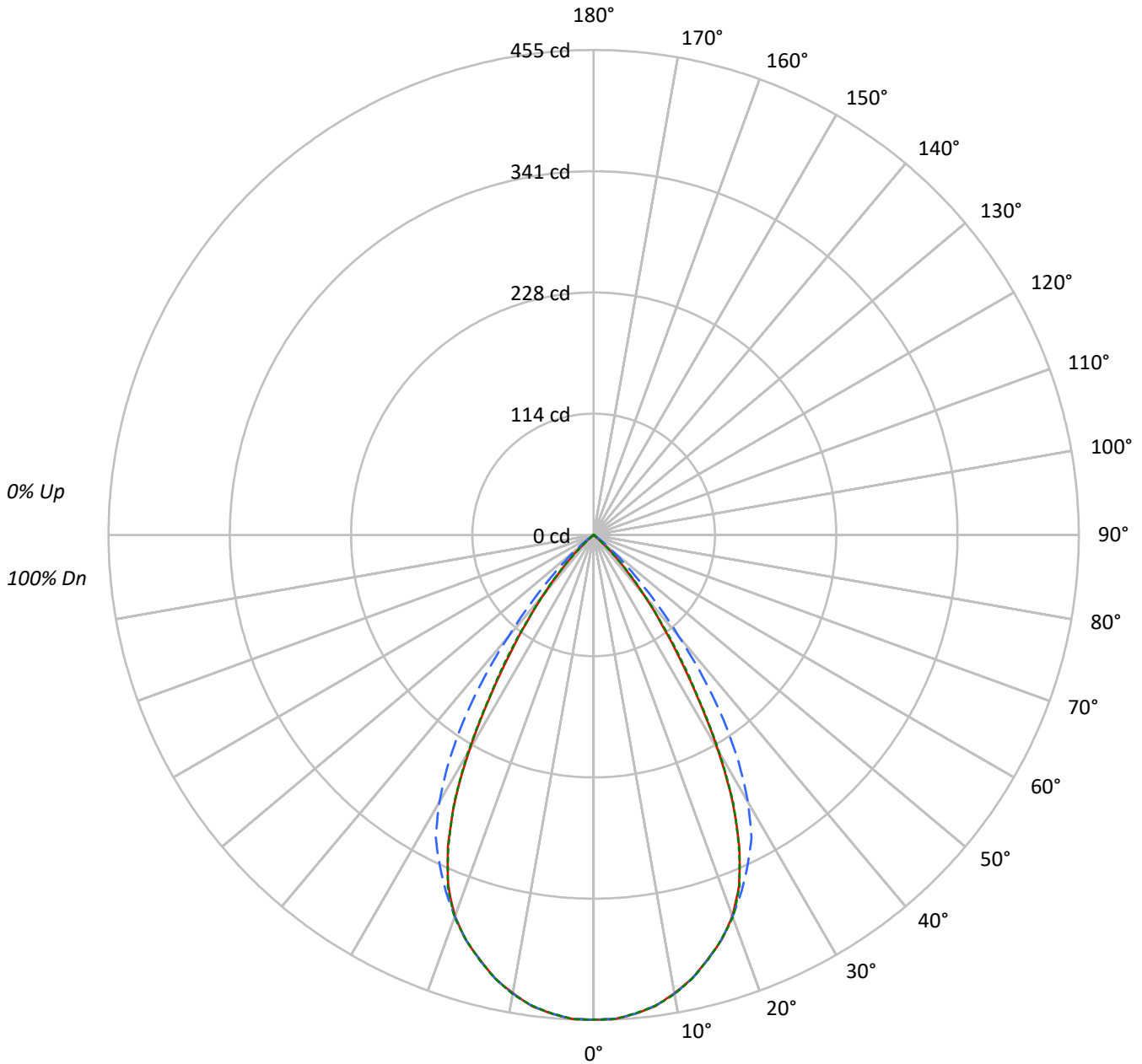
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 454.1 lumens
Efficiency: N/A
Efficacy: 56.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8
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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	44049	44049	44049
5°	43848	43848	43809
10°	42938	42988	43027
15°	41371	41411	41411
20°	39227	39268	39350
25°	34579	36514	34440
30°	26086	32362	26332
35°	16356	25190	16912
40°	9232	15681	9232
45°	3877	7919	3809
50°	316	3044	377
55°	135	642	135
60°	155	78	155
65°	92	92	92
70°	113	113	113
75°	150	150	150
80°	0	223	223
85°	0	445	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7919 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	9.4
10°-20°	115.9	25.5
20°-30°	150.4	33.1
30°-40°	106.9	23.5
40°-50°	34.7	7.6
50°-60°	2.5	0.5
60°-70°	0.4	0.1
70°-80°	0.4	0.1
80°-90°	0.3	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°	308.9	68.0
0°-40°	415.9	91.6
0°-60°	453.0	99.8
0°-90°	454.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	454.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	451	451	451	451	450	43
15°	412	414	413	414	413	116
25°	324	332	342	334	322	145
35°	138	164	213	165	143	89
45°	28	40	58	41	28	24
55°	1	1	4	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	454.7	454.7	454.7	454.7	454.7
2.5°	454.7	454.7	454.3	454.3	454.7
5°	450.9	451.3	450.9	450.9	450.5
7.5°	445.8	445.8	445.4	445.4	445.4
10°	436.5	437.0	437.0	437.0	437.4
12.5°	426.4	426.4	426.4	426.4	426.4
15°	412.5	413.8	412.9	413.8	412.9
17.5°	398.6	398.6	398.2	399.0	398.2
20°	380.5	380.5	380.9	381.7	381.7
22.5°	356.4	360.6	362.3	361.5	357.3
25°	323.5	331.9	341.6	333.6	322.2
27.5°	282.2	298.2	320.6	300.7	283.0
30°	233.2	257.3	289.3	258.1	235.4
32.5°	182.6	210.5	253.1	212.6	184.3
35°	138.3	163.7	213.0	165.3	143.0
37.5°	102.1	125.3	169.1	126.1	105.0
40°	73.0	89.8	124.0	91.5	73.0
42.5°	46.8	63.7	87.3	64.1	48.9
45°	28.3	40.1	57.8	40.9	27.8
47.5°	12.7	22.8	35.9	23.6	12.7
50°	2.1	9.3	20.2	9.7	2.5
52.5°	1.3	1.7	9.7	1.7	1.3
55°	0.8	0.8	3.8	0.8	0.8
57.5°	0.8	0.8	0.8	0.8	0.8
60°	0.8	0.4	0.4	0.4	0.8
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.0	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.4
85°	0.0	0.0	0.4	0.4	0.4
87.5°	0.0	0.0	0.4	0.4	0.4
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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