

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: P837676

Luminaire Tested: HCSQ460D010-HM44560827-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837676
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: HCSQ460D010-HM44560827-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

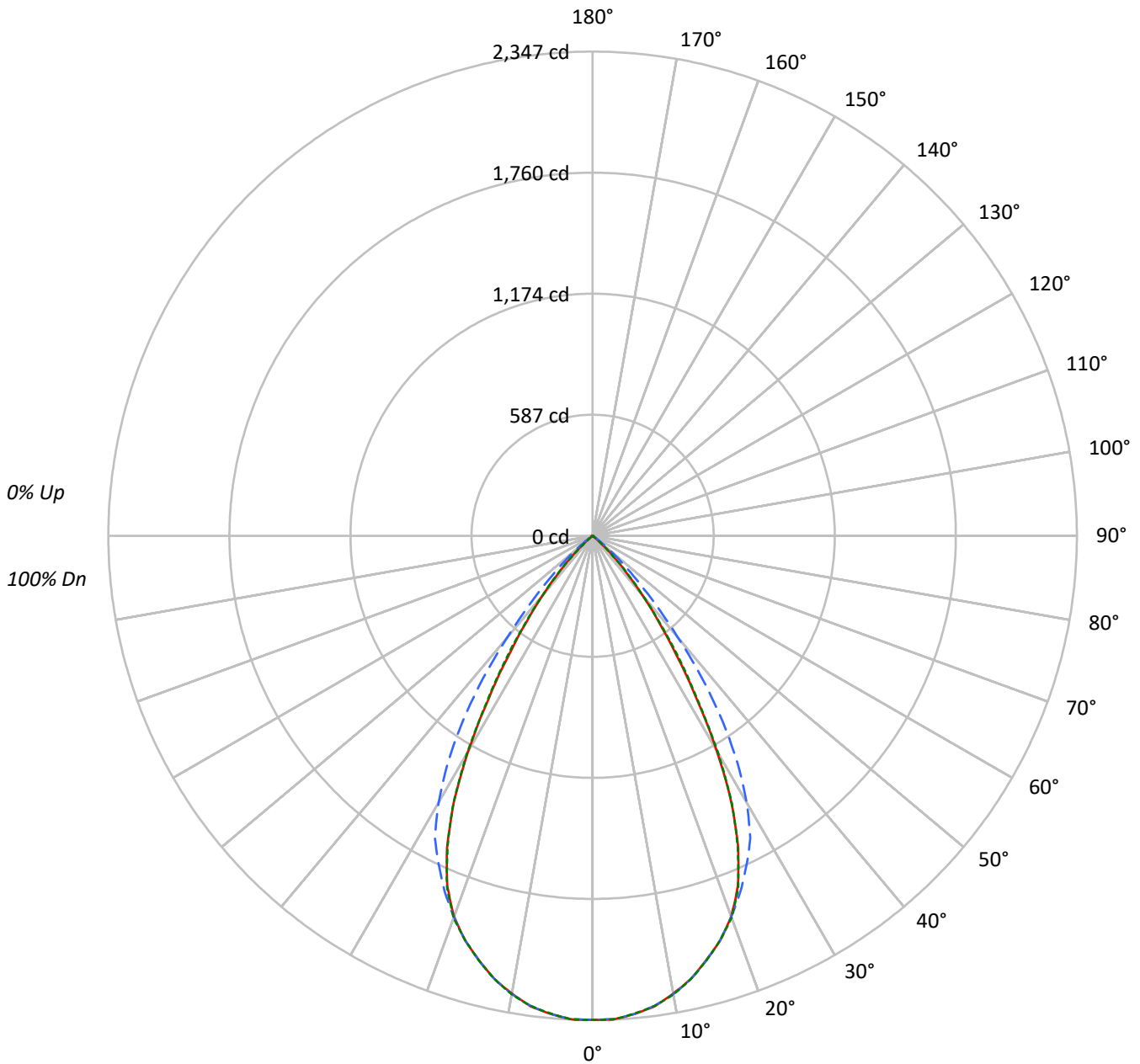
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2344.2 lumens
Efficiency: N/A
Efficacy: 41.9 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): 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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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°	227328	227328	227328
5°	226300	226300	226086
10°	221627	221844	222060
15°	213523	213734	213734
20°	202422	202649	203103
25°	178464	188480	177769
30°	134660	167044	135879
35°	84440	130007	87278
40°	47626	80936	47626
45°	19975	40854	19687
50°	1643	15749	1974
55°	743	3310	743
60°	853	426	853
65°	504	504	504
70°	623	623	623
75°	823	823	823
80°	0	1227	1227
85°	0	2445	2445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 40854 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.9	9.4
10°-20°	598.3	25.5
20°-30°	776.2	33.1
30°-40°	551.8	23.5
40°-50°	178.9	7.6
50°-60°	12.9	0.6
60°-70°	2.2	0.1
70°-80°	2.3	0.1
80°-90°	1.5	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°	1594.4	68.0
0°-40°	2146.2	91.6
0°-60°	2338.1	99.7
0°-90°	2344.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2344.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2347	2347	2347	2347	2347	
5°	2327	2329	2327	2327	2325	220
15°	2129	2136	2131	2136	2131	598
25°	1670	1713	1763	1722	1663	748
35°	714	845	1099	853	738	457
45°	146	207	298	211	144	121
55°	4	4	20	4	4	5
65°	2	2	2	2	2	2
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2346.6	2346.6	2346.6	2346.6	2346.6
2.5°	2346.6	2346.6	2344.5	2344.5	2346.6
5°	2327.1	2329.2	2327.1	2327.1	2324.9
7.5°	2300.9	2300.9	2298.8	2298.8	2298.8
10°	2253.0	2255.2	2255.2	2255.2	2257.4
12.5°	2200.8	2200.8	2200.8	2200.8	2200.8
15°	2129.0	2135.5	2131.1	2135.5	2131.1
17.5°	2057.1	2057.1	2054.9	2059.3	2054.9
20°	1963.5	1963.5	1965.7	1970.1	1970.1
22.5°	1839.4	1861.2	1869.9	1865.6	1843.8
25°	1669.6	1713.2	1763.3	1721.9	1663.1
27.5°	1456.3	1539.0	1654.4	1552.1	1460.7
30°	1203.8	1327.9	1493.3	1332.2	1214.7
32.5°	942.6	1086.2	1306.1	1097.1	951.3
35°	714.0	844.6	1099.3	853.3	738.0
37.5°	526.8	646.5	872.9	650.9	542.0
40°	376.6	463.7	640.0	472.4	376.6
42.5°	241.6	328.7	450.6	330.9	252.5
45°	145.8	206.8	298.2	211.2	143.7
47.5°	65.3	117.6	185.0	121.9	65.3
50°	10.9	47.9	104.5	50.1	13.1
52.5°	6.5	8.7	50.1	8.7	6.5
55°	4.4	4.4	19.6	4.4	4.4
57.5°	4.4	4.4	4.4	4.4	4.4
60°	4.4	2.2	2.2	2.2	4.4
62.5°	2.2	2.2	2.2	2.2	2.2
65°	2.2	2.2	2.2	2.2	2.2
67.5°	2.2	2.2	2.2	2.2	2.2
70°	2.2	2.2	2.2	2.2	2.2
72.5°	2.2	2.2	2.2	2.2	2.2
75°	2.2	2.2	2.2	2.2	2.2
77.5°	2.2	2.2	2.2	2.2	2.2
80°	0.0	2.2	2.2	2.2	2.2
82.5°	0.0	2.2	2.2	2.2	2.2
85°	0.0	0.0	2.2	2.2	2.2
87.5°	0.0	0.0	2.2	2.2	2.2
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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