

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: P837369

Luminaire Tested: HCSQ420D010-HM40525840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837369
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: HCSQ420D010-HM40525840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

Summary

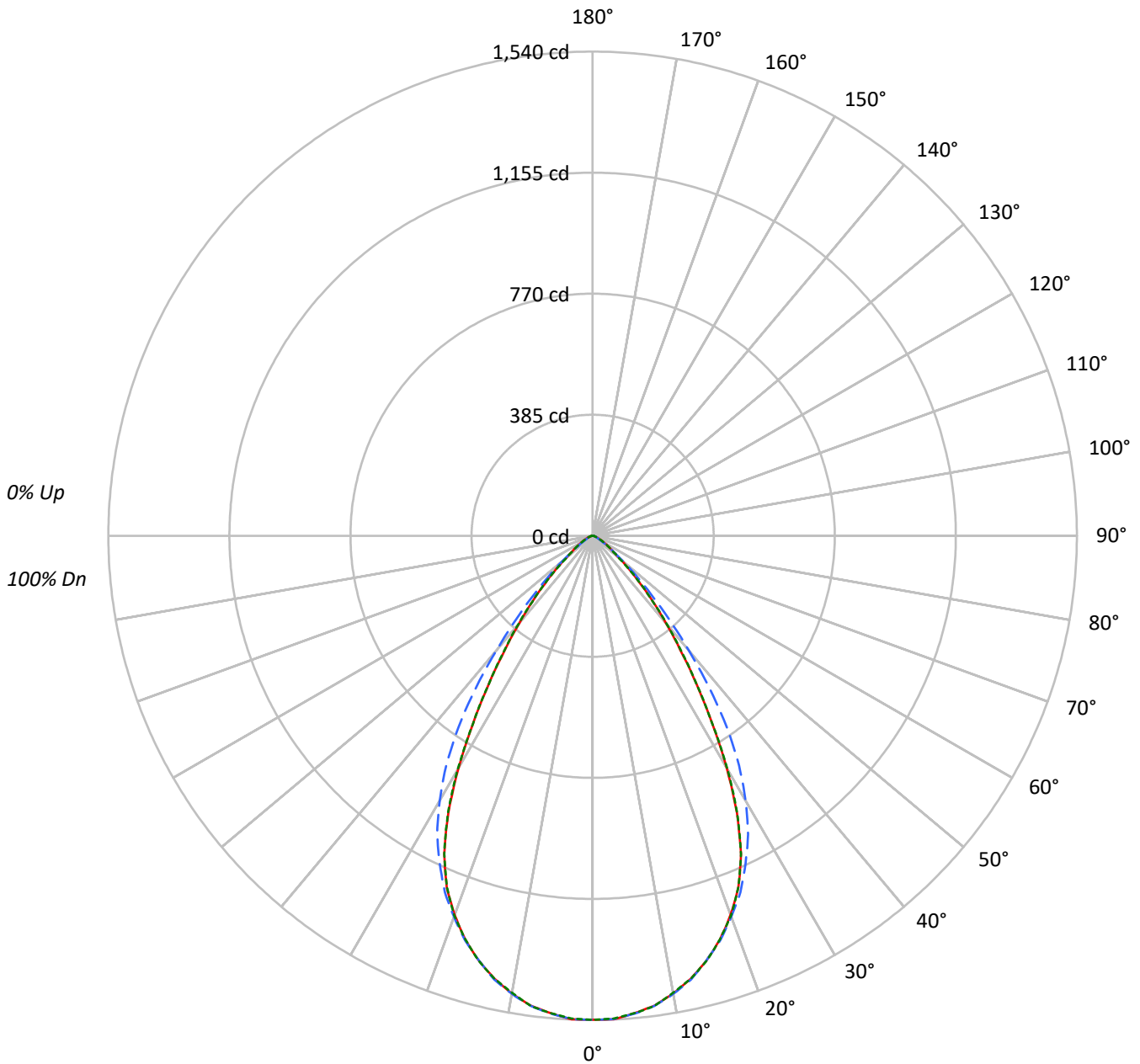
Lumens per Lamp: N/A
Luminaire Lumens: 1730.6 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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			
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°	149140	149140	149140
5°	148231	148416	148231
10°	145460	145548	145174
15°	140290	140199	140390
20°	132247	132938	132536
25°	119332	122988	119332
30°	95307	108819	96056
35°	68037	88059	68155
40°	45944	59892	46664
45°	29182	35443	29319
50°	16623	18914	16051
55°	10928	9154	10759
60°	7556	5348	7363
65°	5226	3920	5226
70°	3767	2974	3767
75°	2508	2508	2508
80°	1618	2120	2120
85°	2112	2112	2112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 35443 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	8.3
10°-20°	392.2	22.7
20°-30°	513.5	29.7
30°-40°	403.6	23.3
40°-50°	188.5	10.9
50°-60°	58.4	3.4
60°-70°	20.8	1.2
70°-80°	7.4	0.4
80°-90°	2.0	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°	1049.9	60.7
0°-40°	1453.5	84.0
0°-60°	1700.4	98.3
0°-90°	1730.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1730.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1540	1540	1540	1540	1540	
5°	1524	1525	1526	1528	1524	144
15°	1399	1399	1398	1399	1400	392
25°	1116	1132	1151	1133	1116	502
35°	575	628	745	635	576	363
45°	213	239	259	234	214	170
55°	65	61	54	60	64	61
65°	23	21	17	20	23	24
75°	7	7	7	7	7	8
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1539.5	1539.5	1539.5	1539.5	1539.5
2.5°	1539.5	1537.6	1538.6	1536.7	1536.7
5°	1524.3	1525.3	1526.2	1528.1	1524.3
7.5°	1507.2	1509.1	1508.2	1508.2	1508.2
10°	1478.7	1479.6	1479.6	1479.6	1475.8
12.5°	1442.6	1444.5	1445.4	1442.6	1442.6
15°	1398.8	1398.8	1397.9	1398.8	1399.8
17.5°	1346.5	1349.4	1349.4	1346.5	1345.6
20°	1282.8	1287.6	1289.5	1285.6	1285.6
22.5°	1211.5	1216.2	1227.6	1218.1	1210.5
25°	1116.4	1131.6	1150.6	1132.6	1116.4
27.5°	993.7	1027.0	1070.7	1032.7	996.6
30°	852.0	906.2	972.8	909.1	858.7
32.5°	707.5	768.3	866.3	773.1	707.5
35°	575.3	627.6	744.6	635.2	576.3
37.5°	457.4	507.8	610.5	513.5	464.1
40°	363.3	404.1	473.6	403.2	369.0
42.5°	283.4	312.9	358.5	311.9	282.4
45°	213.0	238.7	258.7	233.9	214.0
47.5°	156.9	174.0	185.4	171.2	153.1
50°	110.3	122.7	125.5	119.8	106.5
52.5°	82.7	82.7	83.7	81.8	80.8
55°	64.7	60.9	54.2	59.9	63.7
57.5°	50.4	46.6	38.0	44.7	49.4
60°	39.0	35.2	27.6	34.2	38.0
62.5°	30.4	26.6	21.9	26.6	29.5
65°	22.8	20.9	17.1	20.0	22.8
67.5°	17.1	15.2	13.3	15.2	17.1
70°	13.3	12.4	10.5	11.4	13.3
72.5°	9.5	8.6	8.6	8.6	9.5
75°	6.7	6.7	6.7	6.7	6.7
77.5°	4.8	4.8	4.8	4.8	4.8
80°	2.9	2.9	3.8	3.8	3.8
82.5°	1.9	1.9	2.9	2.9	2.9
85°	1.9	1.9	1.9	1.9	1.9
87.5°	1.0	1.0	1.0	1.9	1.9
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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