

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: P837513

Luminaire Tested: HCSQ440D010-HM43040827-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837513
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040827-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

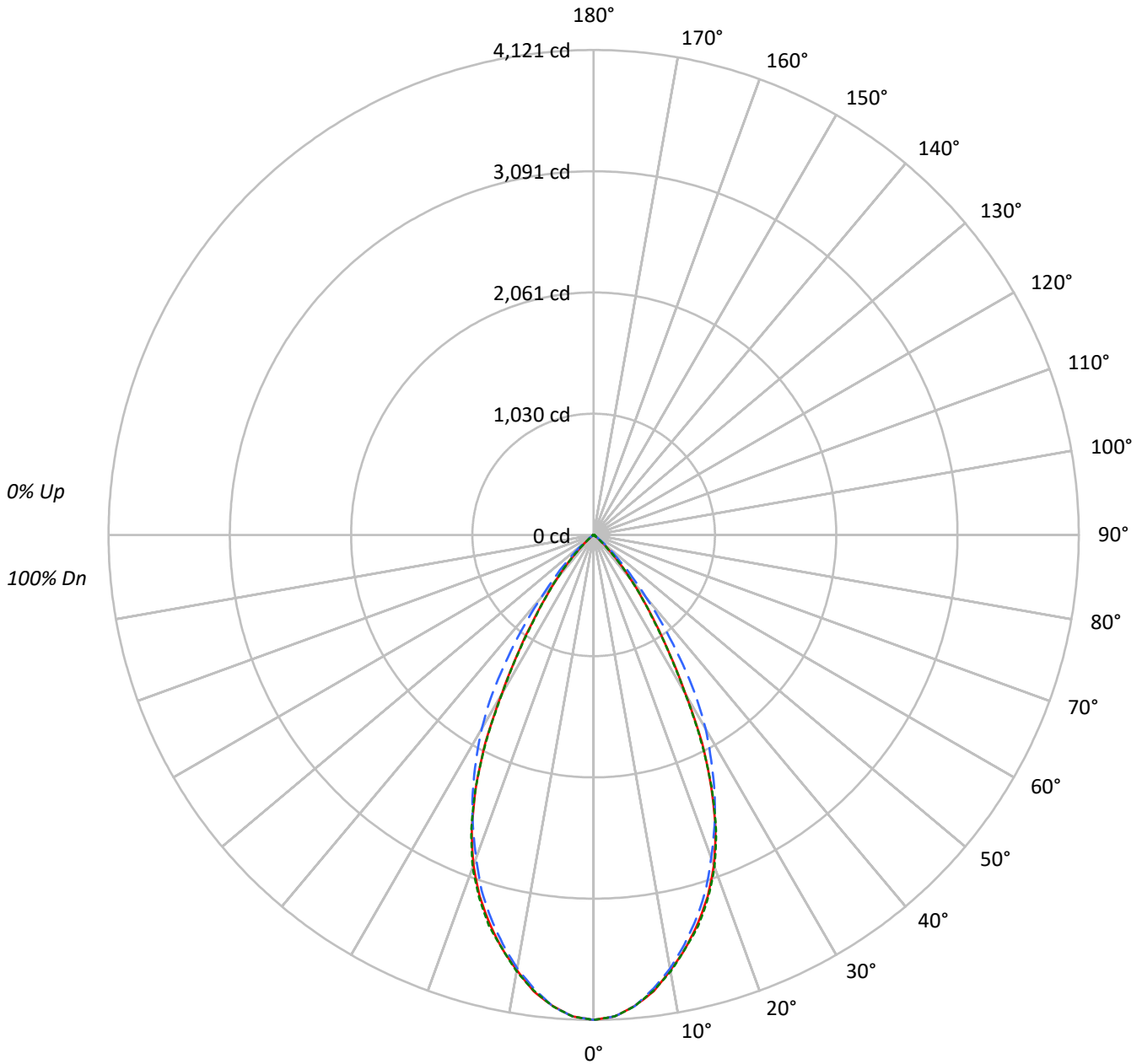
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3330.1 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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									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																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	399214	399214	399214
5°	390655	390810	390810
10°	369507	367864	370491
15°	342841	338147	344686
20°	307763	300866	309659
25°	252774	260107	253672
30°	174729	212527	173420
35°	107596	150123	105029
40°	60702	87777	60272
45°	27729	43992	26578
50°	7053	17648	7310
55°	3395	5371	3108
60°	2267	1938	2596
65°	1926	1536	1926
70°	1416	1416	1898
75°	1235	1235	1871
80°	1841	1841	1841
85°	1890	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43992 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.9	11.3
10°-20°	946.7	28.4
20°-30°	1082.3	32.5
30°-40°	671.8	20.2
40°-50°	211.7	6.4
50°-60°	27.4	0.8
60°-70°	8.1	0.2
70°-80°	4.3	0.1
80°-90°	2.9	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°	2403.9	72.2
0°-40°	3075.7	92.4
0°-60°	3314.8	99.5
0°-90°	3330.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3330.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4121	4121	4121	4121	4121	
5°	4017	4014	4019	4016	4019	375
15°	3418	3393	3372	3393	3437	953
25°	2365	2398	2433	2398	2373	1061
35°	910	1050	1269	1025	888	585
45°	202	242	321	244	194	171
55°	20	20	32	20	18	20
65°	8	8	7	8	8	8
75°	3	3	3	3	5	4
85°	2	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4120.9	4120.9	4120.9	4120.9	4120.9
2.5°	4095.8	4099.1	4095.8	4102.5	4095.8
5°	4017.2	4013.8	4018.8	4015.5	4018.8
7.5°	3910.1	3890.1	3888.4	3901.8	3903.5
10°	3756.3	3751.3	3739.6	3751.3	3766.3
12.5°	3599.1	3579.0	3562.3	3585.7	3599.1
15°	3418.4	3393.4	3371.6	3393.4	3436.8
17.5°	3219.4	3184.3	3165.9	3191.0	3232.8
20°	2985.3	2948.5	2918.4	2940.1	3003.7
22.5°	2704.3	2701.0	2680.9	2692.6	2716.0
25°	2364.8	2398.3	2433.4	2398.3	2373.2
27.5°	1991.9	2082.2	2162.5	2057.1	1976.8
30°	1562.0	1699.2	1899.9	1689.2	1550.3
32.5°	1207.5	1351.3	1607.2	1332.9	1197.5
35°	909.8	1050.3	1269.4	1025.2	888.1
37.5°	669.0	774.3	965.0	767.6	669.0
40°	480.0	548.6	694.1	546.9	476.6
42.5°	332.8	378.0	485.0	374.6	322.8
45°	202.4	242.5	321.1	244.2	194.0
47.5°	107.0	153.9	202.4	147.2	107.0
50°	46.8	81.9	117.1	80.3	48.5
52.5°	25.1	35.1	63.6	35.1	25.1
55°	20.1	20.1	31.8	20.1	18.4
57.5°	15.1	15.1	16.7	15.1	15.1
60°	11.7	11.7	10.0	11.7	13.4
62.5°	10.0	10.0	8.4	10.0	10.0
65°	8.4	8.4	6.7	8.4	8.4
67.5°	6.7	6.7	6.7	6.7	6.7
70°	5.0	5.0	5.0	6.7	6.7
72.5°	5.0	5.0	5.0	5.0	5.0
75°	3.3	3.3	3.3	3.3	5.0
77.5°	3.3	3.3	3.3	3.3	3.3
80°	3.3	3.3	3.3	3.3	3.3
82.5°	1.7	3.3	3.3	3.3	3.3
85°	1.7	3.3	3.3	3.3	3.3
87.5°	1.7	1.7	3.3	3.3	3.3
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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