

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: P837230

Luminaire Tested: HCSQ405D010-HM40525940-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837230
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525940-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

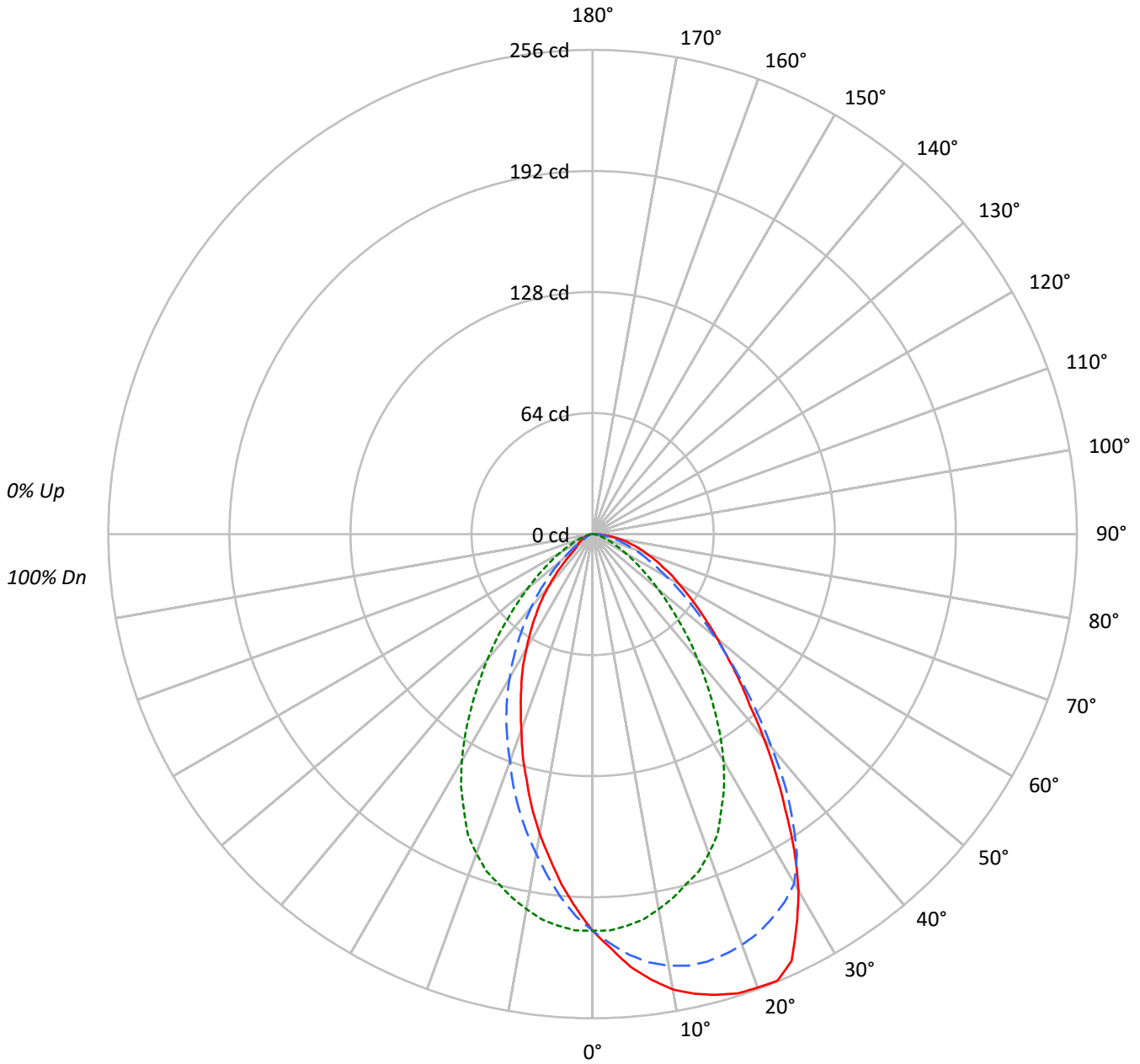
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 339.1 lumens
Efficiency: N/A
Efficacy: 56.5 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
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 (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					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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69				
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62				
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55				
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50				
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45				
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42				
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38				
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	20315	20315	20315	20315	20315
5°	22328	21715	20217	18739	18107
10°	24051	22792	19802	16880	15828
15°	25294	23469	19206	15094	13509
20°	26309	23825	18515	13155	11340
25°	26605	23965	17199	11544	9535
30°	24352	23849	15471	9810	7819
35°	20992	21772	13186	8054	6185
40°	17793	18615	10901	6361	4629
45°	15070	15440	8713	4727	2973
50°	12991	12690	6767	3180	1793
55°	11451	10455	5168	1757	1605
60°	10191	8758	3856	988	1434
65°	9330	7496	2865	894	1307
70°	8667	6486	2096	850	1275
75°	8122	5689	1460	786	1123
80°	7810	4965	1004	837	1004
85°	7558	4335	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 15687 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.7	5.8
10°-20°	54.1	16.0
20°-30°	75.7	22.3
30°-40°	74.0	21.8
40°-50°	53.7	15.8
50°-60°	32.4	9.5
60°-70°	18.2	5.4
70°-80°	9.0	2.7
80°-90°	2.5	0.7
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°	149.5	44.1
0°-40°	223.4	65.9
0°-60°	309.5	91.2
0°-90°	339.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	339.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	210	210	210	210	210	
5°	230	223	208	193	186	22
15°	252	234	192	150	135	71
25°	249	224	161	108	89	112
35°	178	184	112	68	52	111
45°	110	113	64	34	22	85
55°	68	62	31	10	10	61
65°	41	33	12	4	6	41
75°	22	15	4	2	3	23
85°	7	4	1	1	1	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	209.7	209.7	209.7	209.7	209.7	209.7	209.7	209.7	209.7
2.5°	219.2	218.6	216.8	213.2	209.7	205.5	202.2	199.8	198.1
5°	229.6	228.4	223.3	215.9	207.9	199.8	192.7	188.5	186.2
7.5°	237.6	235.5	228.4	218.0	205.5	193.3	182.3	175.8	173.1
10°	244.5	240.9	231.7	217.7	201.3	185.3	171.6	163.9	160.9
12.5°	248.9	245.0	233.7	217.4	196.9	177.2	161.2	151.1	148.1
15°	252.2	247.4	234.0	215.0	191.5	168.9	150.5	138.6	134.7
17.5°	254.6	248.0	232.9	212.3	186.8	160.3	139.5	126.7	122.8
20°	255.2	248.0	231.1	208.5	179.6	151.7	127.6	114.8	110.0
22.5°	255.5	247.1	228.4	203.7	172.2	141.9	117.8	104.4	99.3
25°	248.9	244.2	224.2	195.7	160.9	131.1	108.0	93.4	89.2
27.5°	233.5	233.2	219.5	185.0	150.5	119.6	97.8	83.9	80.0
30°	217.7	218.0	213.2	173.1	138.3	108.5	87.7	74.1	69.9
32.5°	198.4	201.3	201.0	159.7	125.2	98.1	77.9	65.1	61.0
35°	177.5	182.9	184.1	144.5	111.5	86.2	68.1	56.5	52.3
37.5°	158.8	164.2	166.8	131.1	98.7	75.8	58.9	48.8	44.6
40°	140.7	145.1	147.2	115.7	86.2	65.1	50.3	40.7	36.6
42.5°	123.1	129.7	129.1	102.6	75.2	56.5	42.5	33.0	28.8
45°	110.0	114.5	112.7	88.9	63.6	47.6	34.5	25.6	21.7
47.5°	96.9	100.2	97.5	77.3	53.8	39.3	28.0	18.7	14.6
50°	86.2	87.7	84.2	65.7	44.9	32.1	21.1	12.5	11.9
52.5°	76.1	77.0	72.0	55.9	37.2	25.9	15.5	9.8	10.4
55°	67.8	67.5	61.9	47.3	30.6	19.9	10.4	8.9	9.5
57.5°	59.8	58.9	53.2	39.3	25.0	15.5	6.2	7.7	8.3
60°	52.6	51.7	45.2	32.4	19.9	11.6	5.1	6.8	7.4
62.5°	47.0	44.9	38.4	26.8	16.1	8.3	4.5	5.9	6.5
65°	40.7	39.0	32.7	21.7	12.5	5.9	3.9	5.1	5.7
67.5°	35.7	33.6	27.7	17.8	10.1	4.2	3.6	4.5	5.1
70°	30.6	28.8	22.9	14.3	7.4	2.7	3.0	3.9	4.5
72.5°	26.5	24.4	19.0	11.3	5.7	2.1	2.7	3.3	3.6
75°	21.7	19.9	15.2	8.6	3.9	1.8	2.1	2.7	3.0
77.5°	18.1	16.4	11.9	6.5	2.7	1.5	1.8	2.4	2.4
80°	14.0	12.5	8.9	4.5	1.8	0.9	1.5	1.8	1.8
82.5°	10.1	8.9	6.2	3.0	0.9	0.9	0.9	1.2	1.2
85°	6.8	5.9	3.9	1.8	0.6	0.6	0.6	0.6	0.6
87.5°	3.9	3.0	1.8	0.6	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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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