

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: P837355

Luminaire Tested: HCSQ420D010-HM40525827-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837355
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: HCSQ420D010-HM40525827-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

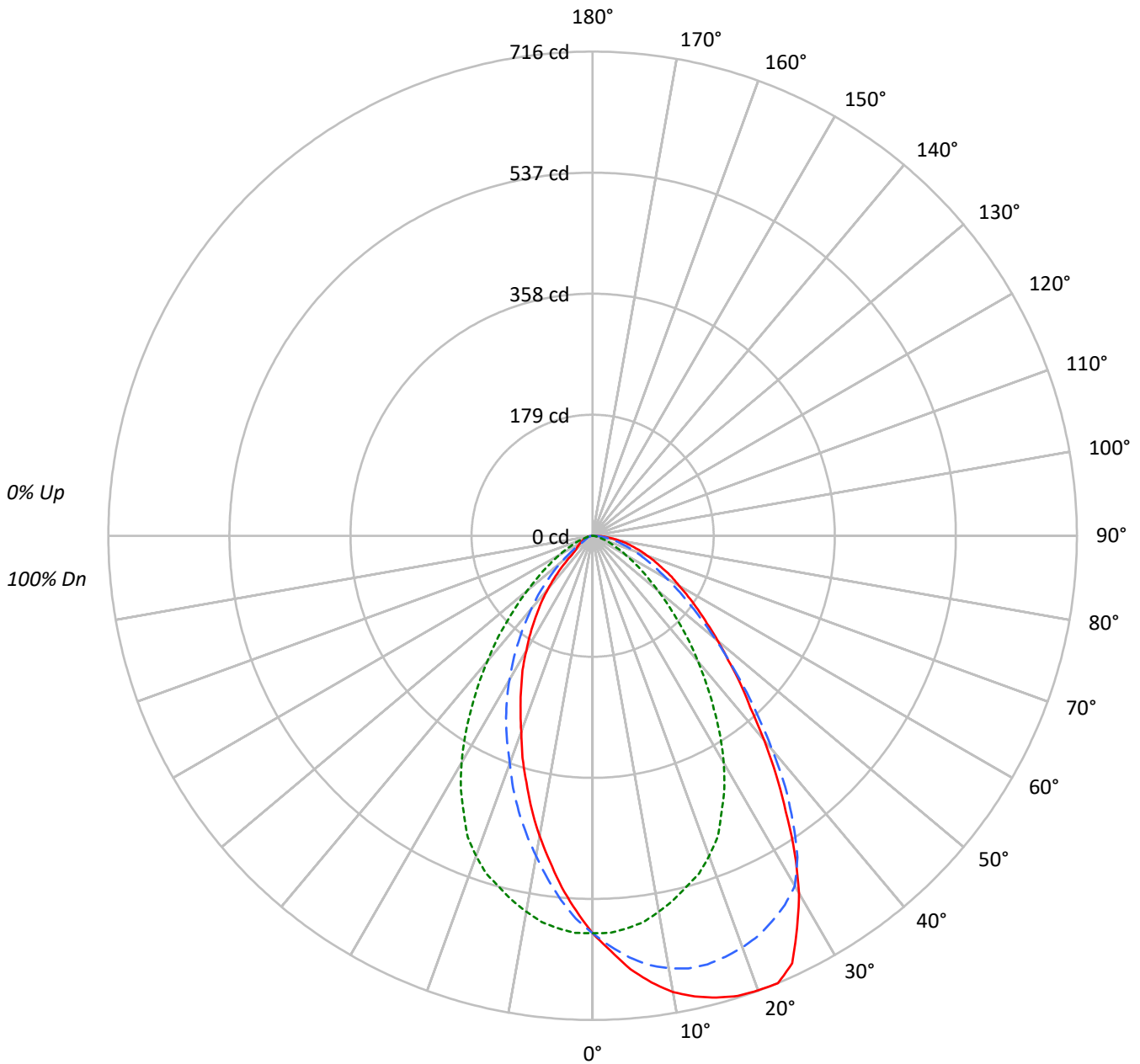
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 950.7 lumens
Efficiency: N/A
Efficacy: 47.5 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): 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	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°	56943	56943	56943	56943	56943
5°	62587	60885	56675	52532	50752
10°	67413	63891	55520	47326	44365
15°	70907	65802	53847	42314	37881
20°	73742	66783	51917	36876	31804
25°	74588	67191	48207	32345	26733
30°	68269	66871	43369	27507	21914
35°	58860	61036	36969	22576	17349
40°	49864	52191	30578	17818	12962
45°	42265	43293	24441	13248	8343
50°	36442	35553	18975	8922	5019
55°	32107	29287	14508	4932	4510
60°	28598	24548	10831	2751	4030
65°	26178	21020	8023	2476	3622
70°	24331	18184	5891	2351	3541
75°	22795	15908	4042	2171	3107
80°	21869	13947	2789	2343	2789
85°	21341	12004	1890	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 43978 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	5.8
10°-20°	151.7	16.0
20°-30°	212.2	22.3
30°-40°	207.4	21.8
40°-50°	150.5	15.8
50°-60°	90.7	9.5
60°-70°	51.0	5.4
70°-80°	25.3	2.7
80°-90°	6.9	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°	419.0	44.1
0°-40°	626.4	65.9
0°-60°	867.6	91.3
0°-90°	950.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	588	588	588	588	588	
5°	644	626	583	540	522	63
15°	707	656	537	422	378	200
25°	698	629	451	303	250	315
35°	498	516	313	191	147	312
45°	308	316	178	97	61	239
55°	190	173	86	29	27	171
65°	114	92	35	11	16	114
75°	61	42	11	6	8	66
85°	19	11	2	2	2	21
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°	587.8	587.8	587.8	587.8	587.8	587.8	587.8	587.8	587.8
2.5°	614.4	612.8	607.8	597.8	587.8	576.1	566.9	560.3	555.3
5°	643.6	640.3	626.1	605.3	582.8	560.3	540.2	528.6	521.9
7.5°	666.1	660.3	640.3	611.1	576.1	541.9	511.1	492.7	485.2
10°	685.3	675.3	649.5	610.3	564.4	519.4	481.1	459.4	451.0
12.5°	697.8	687.0	655.3	609.4	551.9	496.9	451.9	423.5	415.2
15°	707.0	693.6	656.1	602.8	536.9	473.5	421.9	388.5	377.7
17.5°	713.7	695.3	652.8	595.3	523.6	449.4	391.0	355.2	344.3
20°	715.3	695.3	647.8	584.4	503.6	425.2	357.7	321.8	308.5
22.5°	716.2	692.8	640.3	571.1	482.7	397.7	330.1	292.6	278.5
25°	697.8	684.5	628.6	548.6	451.0	367.7	302.6	261.8	250.1
27.5°	654.5	653.6	615.3	518.6	421.9	335.2	274.3	235.1	224.3
30°	610.3	611.1	597.8	485.2	387.7	304.3	245.9	207.6	195.9
32.5°	556.1	564.4	563.6	447.7	351.0	275.1	218.4	182.6	170.9
35°	497.7	512.7	516.1	405.2	312.6	241.8	190.9	158.4	146.7
37.5°	445.2	460.2	467.7	367.7	276.8	212.6	165.1	136.7	125.1
40°	394.3	406.8	412.7	324.3	241.8	182.6	140.9	114.2	102.5
42.5°	345.2	363.5	361.8	287.6	210.9	158.4	119.2	92.5	80.9
45°	308.5	321.0	316.0	249.3	178.4	133.4	96.7	71.7	60.9
47.5°	271.8	281.0	273.5	216.8	150.9	110.0	78.4	52.5	40.9
50°	241.8	245.9	235.9	184.2	125.9	90.0	59.2	35.0	33.3
52.5°	213.4	215.9	201.8	156.7	104.2	72.5	43.4	27.5	29.2
55°	190.1	189.3	173.4	132.6	85.9	55.9	29.2	25.0	26.7
57.5°	167.6	165.1	149.2	110.0	70.0	43.4	17.5	21.7	23.3
60°	147.6	145.1	126.7	90.9	55.9	32.5	14.2	19.2	20.8
62.5°	131.7	125.9	107.5	75.0	45.0	23.3	12.5	16.7	18.3
65°	114.2	109.2	91.7	60.9	35.0	16.7	10.8	14.2	15.8
67.5°	100.0	94.2	77.5	50.0	28.3	11.7	10.0	12.5	14.2
70°	85.9	80.9	64.2	40.0	20.8	7.5	8.3	10.8	12.5
72.5°	74.2	68.4	53.4	31.7	15.8	5.8	7.5	9.2	10.0
75°	60.9	55.9	42.5	24.2	10.8	5.0	5.8	7.5	8.3
77.5°	50.9	45.9	33.3	18.3	7.5	4.2	5.0	6.7	6.7
80°	39.2	35.0	25.0	12.5	5.0	2.5	4.2	5.0	5.0
82.5°	28.3	25.0	17.5	8.3	2.5	2.5	2.5	3.3	3.3
85°	19.2	16.7	10.8	5.0	1.7	1.7	1.7	1.7	1.7
87.5°	10.8	8.3	5.0	1.7	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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