

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: P837455

Luminaire Tested: HCSQ430D010-HM43040927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837455
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: HCSQ430D010-HM43040927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

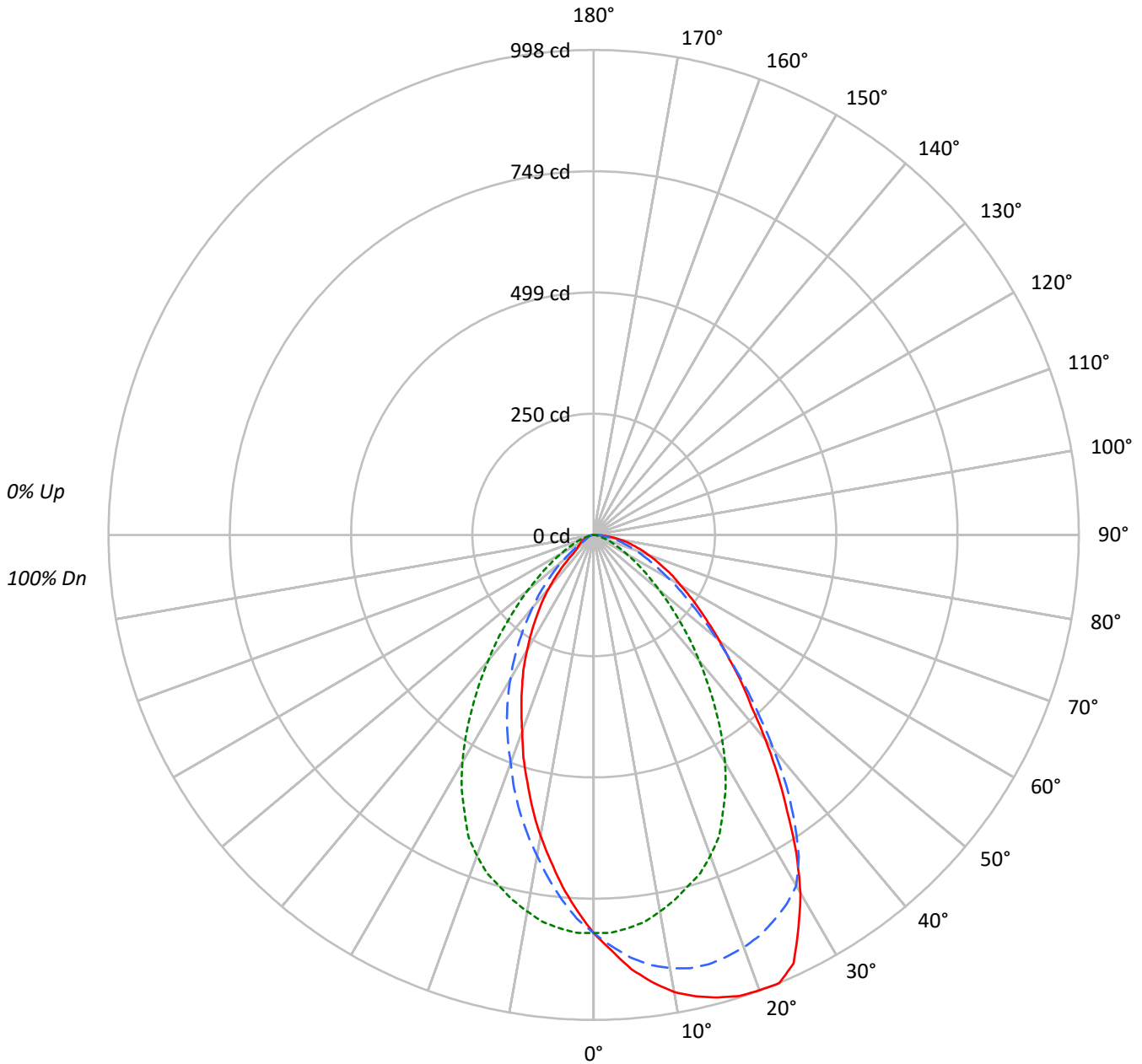
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1325.4 lumens
Efficiency: N/A
Efficacy: 47.0 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): 28.2
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°	79380	79380	79380	79380	79380
5°	87258	84886	79002	73245	70756
10°	93983	89064	77407	65967	61855
15°	98849	91738	75069	58982	52804
20°	102804	93103	72371	51402	44330
25°	103983	93679	67213	45097	37273
30°	95172	93226	60461	38358	30550
35°	82063	85078	51551	31482	24197
40°	69529	72754	42630	24837	18084
45°	58911	60350	34073	18468	11618
50°	50805	49569	26450	12434	7008
55°	44758	40839	20217	6874	6283
60°	39855	34236	15093	3836	5638
65°	36493	29318	11186	3461	5066
70°	33904	25350	8242	3286	4928
75°	31740	22196	5652	3032	4342
80°	30460	19470	3905	3236	3905
85°	29678	16784	2556	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 61309 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.8	5.8
10°-20°	211.5	16.0
20°-30°	295.8	22.3
30°-40°	289.1	21.8
40°-50°	209.8	15.8
50°-60°	126.5	9.5
60°-70°	71.1	5.4
70°-80°	35.2	2.7
80°-90°	9.6	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°	584.1	44.1
0°-40°	873.2	65.9
0°-60°	1209.5	91.3
0°-90°	1325.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1325.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	819	819	819	819	819	
5°	897	873	812	753	728	87
15°	986	915	748	588	526	279
25°	973	876	629	422	349	438
35°	694	719	436	266	205	434
45°	430	440	249	135	85	333
55°	265	242	120	41	37	238
65°	159	128	49	15	22	160
75°	85	59	15	8	12	91
85°	27	15	2	2	2	30
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°	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4
2.5°	856.6	854.3	847.3	833.4	819.4	803.1	790.3	781.0	774.1
5°	897.3	892.6	872.9	843.8	812.4	781.0	753.2	736.9	727.6
7.5°	928.7	920.5	892.6	851.9	803.1	755.5	712.5	686.9	676.4
10°	955.4	941.4	905.4	850.8	786.9	724.1	670.6	640.4	628.8
12.5°	972.8	957.7	913.5	849.6	769.4	692.7	630.0	590.4	578.8
15°	985.6	967.0	914.7	840.3	748.5	660.2	588.1	541.6	526.5
17.5°	994.9	969.3	910.1	829.9	729.9	626.5	545.1	495.1	480.0
20°	997.2	969.3	903.1	814.8	702.0	592.8	498.6	448.6	430.0
22.5°	998.4	965.8	892.6	796.2	673.0	554.4	460.3	408.0	388.2
25°	972.8	954.2	876.4	764.8	628.8	512.6	421.9	365.0	348.7
27.5°	912.4	911.2	857.8	722.9	588.1	467.2	382.4	327.8	312.7
30°	850.8	851.9	833.4	676.4	540.5	424.2	342.9	289.4	273.1
32.5°	775.2	786.9	785.7	624.1	489.3	383.6	304.5	254.5	238.3
35°	693.9	714.8	719.4	564.9	435.9	337.1	266.2	220.8	204.6
37.5°	620.7	641.6	652.0	512.6	385.9	296.4	230.1	190.6	174.3
40°	549.8	567.2	575.3	452.1	337.1	254.5	196.4	159.2	143.0
42.5°	481.2	506.8	504.4	401.0	294.1	220.8	166.2	129.0	112.7
45°	430.0	447.5	440.5	347.5	248.7	186.0	134.8	100.0	84.8
47.5°	378.9	391.7	381.2	302.2	210.4	153.4	109.3	73.2	57.0
50°	337.1	342.9	328.9	256.9	175.5	125.5	82.5	48.8	46.5
52.5°	297.5	301.0	281.3	218.5	145.3	101.1	60.4	38.4	40.7
55°	265.0	263.8	241.8	184.8	119.7	77.9	40.7	34.9	37.2
57.5°	233.6	230.1	208.0	153.4	97.6	60.4	24.4	30.2	32.5
60°	205.7	202.2	176.7	126.7	77.9	45.3	19.8	26.7	29.1
62.5°	183.6	175.5	149.9	104.6	62.8	32.5	17.4	23.2	25.6
65°	159.2	152.3	127.9	84.8	48.8	23.2	15.1	19.8	22.1
67.5°	139.5	131.3	108.1	69.7	39.5	16.3	13.9	17.4	19.8
70°	119.7	112.7	89.5	55.8	29.1	10.5	11.6	15.1	17.4
72.5°	103.4	95.3	74.4	44.2	22.1	8.1	10.5	12.8	13.9
75°	84.8	77.9	59.3	33.7	15.1	7.0	8.1	10.5	11.6
77.5°	70.9	63.9	46.5	25.6	10.5	5.8	7.0	9.3	9.3
80°	54.6	48.8	34.9	17.4	7.0	3.5	5.8	7.0	7.0
82.5°	39.5	34.9	24.4	11.6	3.5	3.5	3.5	4.6	4.6
85°	26.7	23.2	15.1	7.0	2.3	2.3	2.3	2.3	2.3
87.5°	15.1	11.6	7.0	2.3	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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