

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: P837360

Luminaire Tested: HCSQ420D010-HM40525830-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837360
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-HM40525830-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

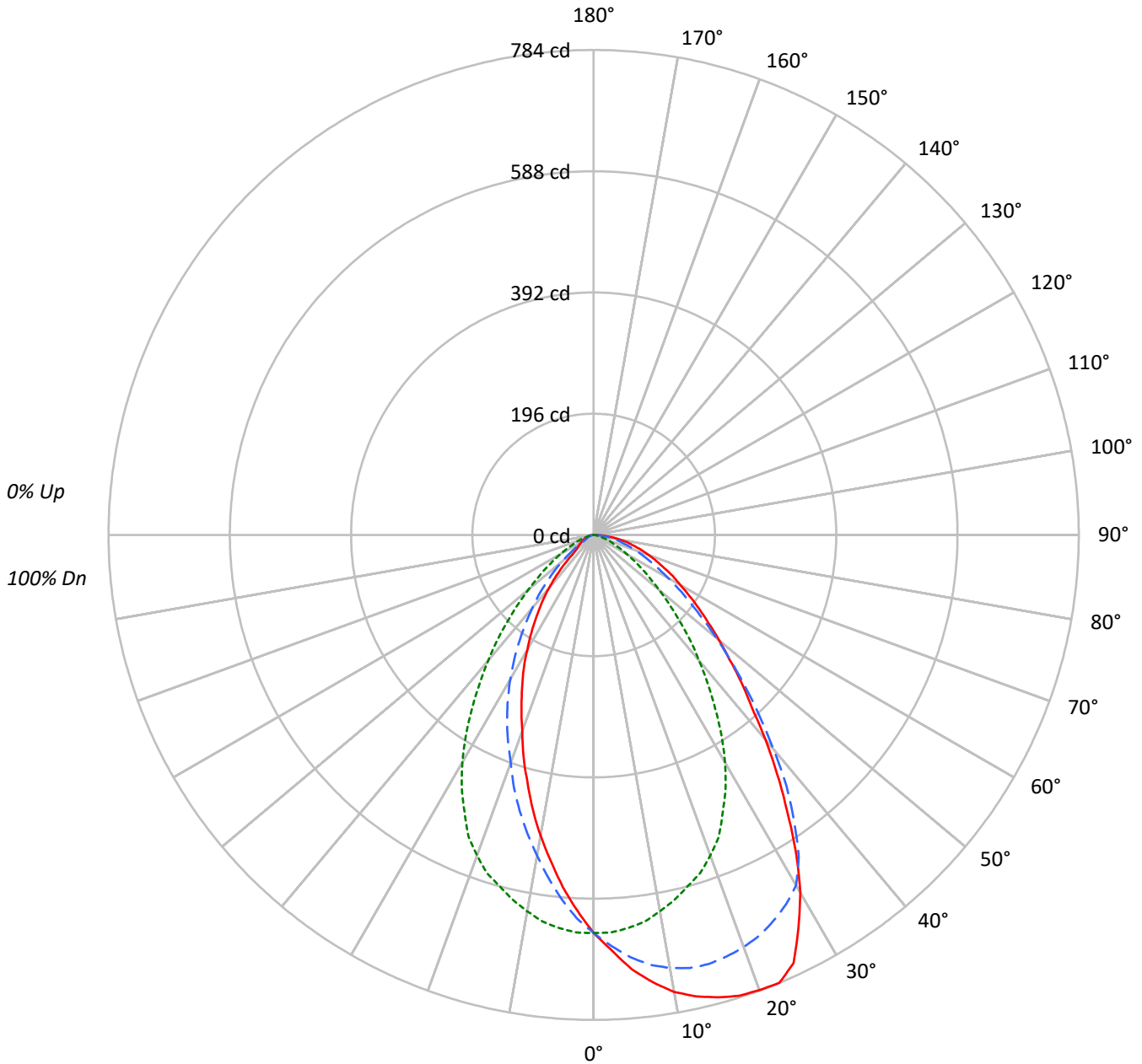
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1040.7 lumens
Efficiency: N/A
Efficacy: 52.0 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): 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					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°	62330	62330	62330	62330	62330
5°	68509	66652	62033	57511	55556
10°	73797	69931	60773	51802	48565
15°	77617	72030	58942	46315	41461
20°	80722	73103	56825	40361	34814
25°	81653	73551	52772	35413	29267
30°	74724	73191	47474	30113	23994
35°	64430	66807	40470	24717	18993
40°	54594	57123	33474	19500	14202
45°	46266	47389	26757	14509	9124
50°	39893	38929	20768	9766	5501
55°	35147	32057	15876	5388	4932
60°	31291	26873	11838	3003	4418
65°	28653	23014	8779	2728	3966
70°	26625	19912	6458	2578	3880
75°	24928	17405	4454	2396	3406
80°	23933	15286	3068	2566	3068
85°	23342	13227	2001	2001	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 48143 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.3	5.8
10°-20°	166.1	16.0
20°-30°	232.2	22.3
30°-40°	227.0	21.8
40°-50°	164.7	15.8
50°-60°	99.3	9.5
60°-70°	55.8	5.4
70°-80°	27.6	2.7
80°-90°	7.6	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°	458.7	44.1
0°-40°	685.7	65.9
0°-60°	949.7	91.3
0°-90°	1040.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1040.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	643	643	643	643	643	
5°	704	685	638	591	571	69
15°	774	718	588	462	413	219
25°	764	688	494	331	274	344
35°	545	565	342	209	161	341
45°	338	346	195	106	67	262
55°	208	190	94	32	29	187
65°	125	100	38	12	17	125
75°	67	46	12	6	9	72
85°	21	12	2	2	2	23
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°	643.4	643.4	643.4	643.4	643.4	643.4	643.4	643.4	643.4
2.5°	672.6	670.8	665.3	654.3	643.4	630.6	620.6	613.3	607.8
5°	704.5	700.9	685.4	662.6	637.9	613.3	591.4	578.6	571.3
7.5°	729.2	722.8	700.9	668.9	630.6	593.2	559.4	539.4	531.1
10°	750.2	739.2	710.9	668.0	617.8	568.6	526.6	502.9	493.7
12.5°	763.9	752.0	717.3	667.1	604.2	543.9	494.6	463.6	454.5
15°	773.9	759.3	718.2	659.8	587.7	518.4	461.8	425.3	413.4
17.5°	781.2	761.1	714.6	651.6	573.1	491.9	428.0	388.8	376.9
20°	783.0	761.1	709.1	639.7	551.2	465.4	391.5	352.3	337.7
22.5°	783.9	758.4	700.9	625.1	528.4	435.3	361.4	320.3	304.8
25°	763.9	749.3	688.1	600.5	493.7	402.5	331.3	286.6	273.8
27.5°	716.4	715.5	673.5	567.6	461.8	366.9	300.2	257.4	245.5
30°	668.0	668.9	654.3	531.1	424.4	333.1	269.2	227.2	214.5
32.5°	608.7	617.8	616.9	490.1	384.2	301.2	239.1	199.9	187.1
35°	544.8	561.3	564.9	443.5	342.2	264.7	209.0	173.4	160.6
37.5°	487.3	503.8	512.0	402.5	303.0	232.7	180.7	149.7	136.9
40°	431.7	445.4	451.7	355.0	264.7	199.9	154.2	125.0	112.3
42.5°	377.8	397.9	396.1	314.9	230.9	173.4	130.5	101.3	88.5
45°	337.7	351.4	345.9	272.9	195.3	146.0	105.9	78.5	66.6
47.5°	297.5	307.6	299.3	237.3	165.2	120.5	85.8	57.5	44.7
50°	264.7	269.2	258.3	201.7	137.8	98.6	64.8	38.3	36.5
52.5°	233.6	236.4	220.9	171.6	114.1	79.4	47.5	30.1	31.9
55°	208.1	207.2	189.8	145.1	94.0	61.1	31.9	27.4	29.2
57.5°	183.4	180.7	163.4	120.5	76.7	47.5	19.2	23.7	25.6
60°	161.5	158.8	138.7	99.5	61.1	35.6	15.5	21.0	22.8
62.5°	144.2	137.8	117.7	82.1	49.3	25.6	13.7	18.3	20.1
65°	125.0	119.6	100.4	66.6	38.3	18.3	11.9	15.5	17.3
67.5°	109.5	103.1	84.9	54.8	31.0	12.8	11.0	13.7	15.5
70°	94.0	88.5	70.3	43.8	22.8	8.2	9.1	11.9	13.7
72.5°	81.2	74.8	58.4	34.7	17.3	6.4	8.2	10.0	11.0
75°	66.6	61.1	46.5	26.5	11.9	5.5	6.4	8.2	9.1
77.5°	55.7	50.2	36.5	20.1	8.2	4.6	5.5	7.3	7.3
80°	42.9	38.3	27.4	13.7	5.5	2.7	4.6	5.5	5.5
82.5°	31.0	27.4	19.2	9.1	2.7	2.7	2.7	3.7	3.7
85°	21.0	18.3	11.9	5.5	1.8	1.8	1.8	1.8	1.8
87.5°	11.9	9.1	5.5	1.8	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

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Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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