

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: P837370

Luminaire Tested: HCSQ420D010-HM40525840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837370
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-HM40525840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

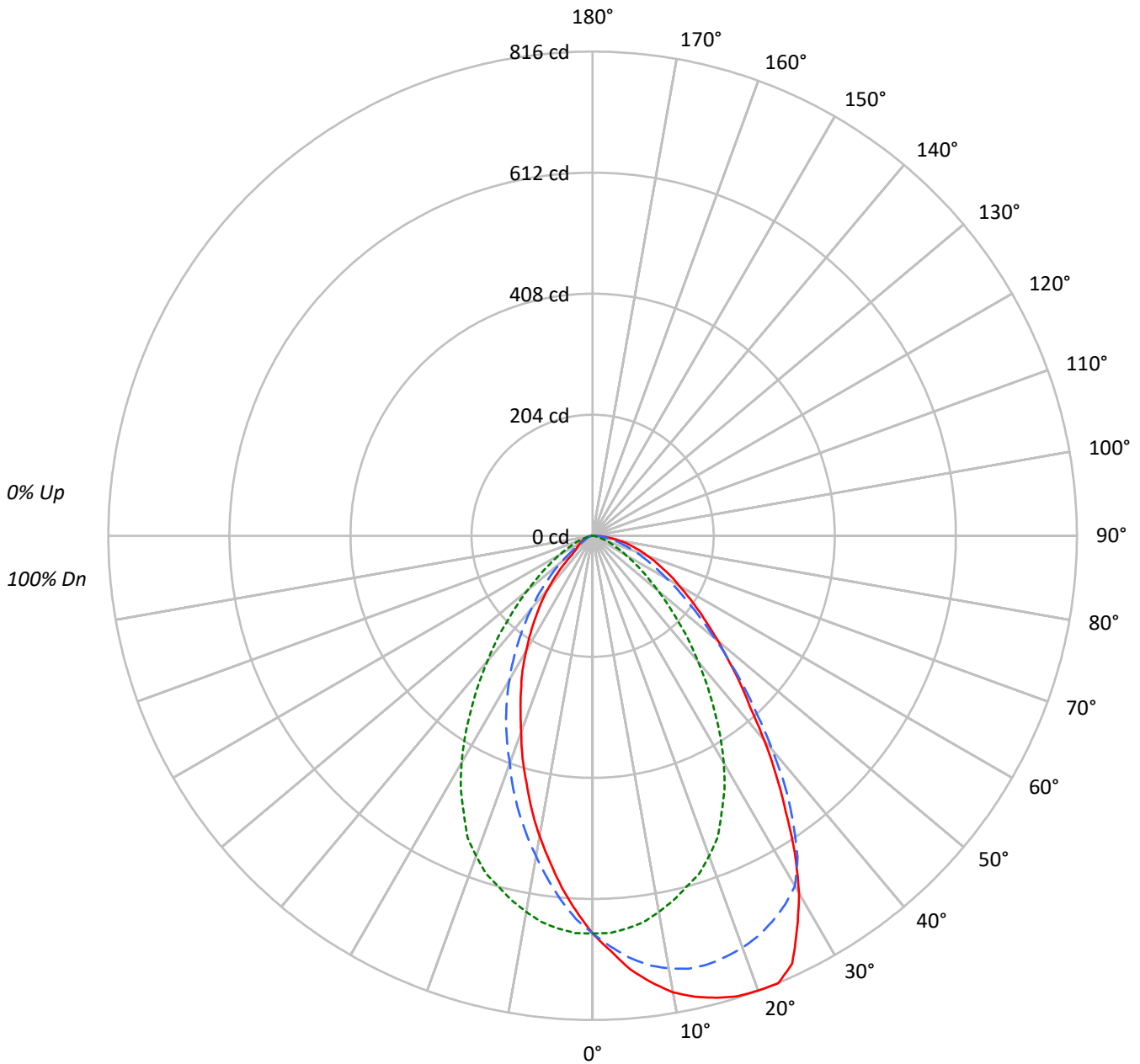
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1084.0 lumens
Efficiency: N/A
Efficacy: 54.2 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°	64926	64926	64926	64926	64926
5°	71359	69424	64620	59903	57871
10°	76866	72843	63301	53956	50592
15°	80846	75029	61399	48241	43186
20°	84082	76144	59186	42041	36258
25°	85042	76608	54974	36888	30485
30°	77834	76245	49443	31366	24990
35°	67114	69586	42161	25746	19785
40°	56857	59500	34866	20310	14783
45°	48184	49362	27866	15111	9508
50°	41551	40541	21627	10173	5727
55°	36600	33391	16535	5624	5134
60°	32608	27997	12342	3139	4611
65°	29845	23977	9146	2842	4149
70°	27730	20734	6741	2691	4050
75°	25976	18153	4641	2508	3556
80°	24937	15900	3180	2678	3180
85°	24342	13783	2112	2112	2112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 50143 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	5.8
10°-20°	173.0	16.0
20°-30°	241.9	22.3
30°-40°	236.4	21.8
40°-50°	171.6	15.8
50°-60°	103.4	9.5
60°-70°	58.1	5.4
70°-80°	28.8	2.7
80°-90°	7.9	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°	477.7	44.1
0°-40°	714.2	65.9
0°-60°	989.2	91.3
0°-90°	1084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1084.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	670	670	670	670	670	
5°	734	714	664	616	595	71
15°	806	748	612	481	431	228
25°	796	717	514	345	285	359
35°	568	588	356	218	167	355
45°	352	360	203	110	69	273
55°	217	198	98	33	30	195
65°	130	105	40	12	18	130
75°	69	48	12	7	10	75
85°	22	12	2	2	2	24
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°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	700.6	698.7	693.0	681.6	670.2	656.8	646.4	638.8	633.1
5°	733.8	730.0	713.9	690.1	664.5	638.8	616.0	602.7	595.1
7.5°	759.5	752.9	730.0	696.8	656.8	617.9	582.7	561.8	553.2
10°	781.4	770.0	740.5	695.8	643.5	592.2	548.5	523.8	514.3
12.5°	795.6	783.3	747.2	694.9	629.3	566.5	515.2	482.9	473.4
15°	806.1	790.9	748.1	687.3	612.2	539.9	481.0	443.0	430.6
17.5°	813.7	792.8	744.3	678.7	597.0	512.4	445.8	404.9	392.6
20°	815.6	792.8	738.6	666.4	574.1	484.8	407.8	366.9	351.7
22.5°	816.5	789.9	730.0	651.1	550.4	453.4	376.4	333.7	317.5
25°	795.6	780.4	716.7	625.5	514.3	419.2	345.1	298.5	285.2
27.5°	746.2	745.3	701.5	591.3	481.0	382.1	312.7	268.1	255.7
30°	695.8	696.8	681.6	553.2	442.0	347.0	280.4	236.7	223.4
32.5°	634.0	643.5	642.6	510.5	400.2	313.7	249.1	208.2	194.9
35°	567.5	584.6	588.4	462.0	356.5	275.7	217.7	180.6	167.3
37.5°	507.6	524.7	533.3	419.2	315.6	242.4	188.2	155.9	142.6
40°	449.6	463.9	470.5	369.8	275.7	208.2	160.6	130.2	116.9
42.5°	393.5	414.5	412.6	327.9	240.5	180.6	135.9	105.5	92.2
45°	351.7	366.0	360.3	284.2	203.4	152.1	110.3	81.7	69.4
47.5°	309.9	320.3	311.8	247.2	172.1	125.5	89.4	59.9	46.6
50°	275.7	280.4	269.0	210.1	143.5	102.7	67.5	39.9	38.0
52.5°	243.3	246.2	230.0	178.7	118.8	82.7	49.4	31.4	33.3
55°	216.7	215.8	197.7	151.1	97.9	63.7	33.3	28.5	30.4
57.5°	191.1	188.2	170.2	125.5	79.8	49.4	20.0	24.7	26.6
60°	168.3	165.4	144.5	103.6	63.7	37.1	16.2	21.9	23.8
62.5°	150.2	143.5	122.6	85.6	51.3	26.6	14.3	19.0	20.9
65°	130.2	124.5	104.6	69.4	39.9	19.0	12.4	16.2	18.1
67.5°	114.1	107.4	88.4	57.0	32.3	13.3	11.4	14.3	16.2
70°	97.9	92.2	73.2	45.6	23.8	8.6	9.5	12.4	14.3
72.5°	84.6	77.9	60.8	36.1	18.1	6.7	8.6	10.5	11.4
75°	69.4	63.7	48.5	27.6	12.4	5.7	6.7	8.6	9.5
77.5°	58.0	52.3	38.0	20.9	8.6	4.8	5.7	7.6	7.6
80°	44.7	39.9	28.5	14.3	5.7	2.9	4.8	5.7	5.7
82.5°	32.3	28.5	20.0	9.5	2.9	2.9	2.9	3.8	3.8
85°	21.9	19.0	12.4	5.7	1.9	1.9	1.9	1.9	1.9
87.5°	12.4	9.5	5.7	1.9	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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