

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: P837500

Luminaire Tested: HCSQ435D010-HM43040930-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837500
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: HCSQ435D010-HM43040930-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

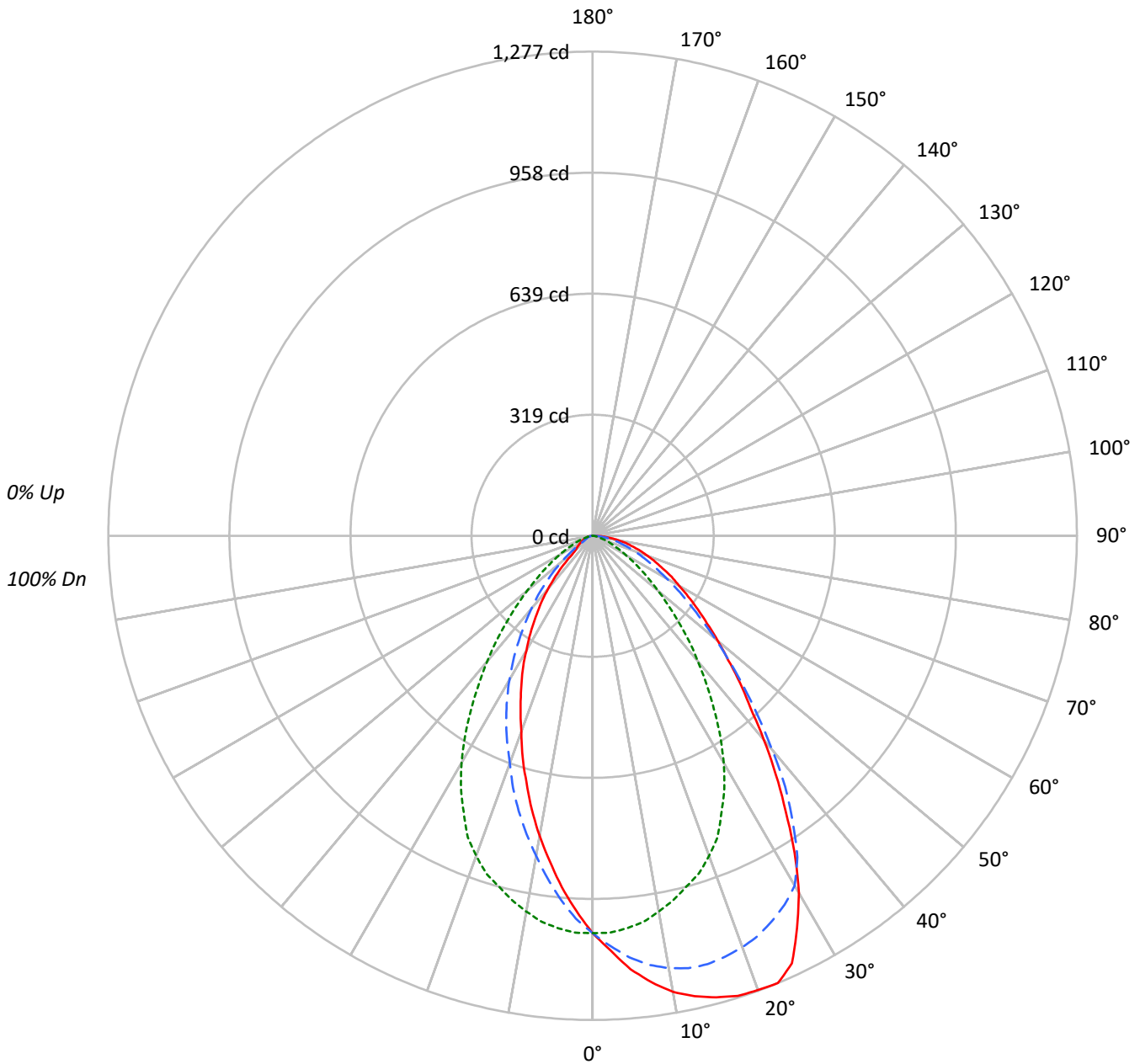
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1695.0 lumens
Efficiency: N/A
Efficacy: 49.9 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): 34
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°	101516	101516	101516	101516	101516
5°	111589	108555	101038	93667	90487
10°	120188	113902	98990	84362	79099
15°	126409	117323	96000	75430	67527
20°	131474	119062	92557	65732	56701
25°	132982	119792	85950	57667	47662
30°	121706	119211	77319	49052	39073
35°	104947	108814	65920	40257	30938
40°	88903	93038	54505	31767	23117
45°	75351	77174	43581	23619	14865
50°	64957	63389	33820	15900	8967
55°	57239	52223	25858	8783	8040
60°	50976	43768	19298	4902	7208
65°	46671	37479	14304	4424	6464
70°	43365	32403	10537	4220	6316
75°	40611	28372	7224	3893	5577
80°	38996	24882	4965	4128	4965
85°	38014	21452	3335	3335	3335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 78393 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.3	5.8
10°-20°	270.5	16.0
20°-30°	378.2	22.3
30°-40°	369.7	21.8
40°-50°	268.3	15.8
50°-60°	161.7	9.5
60°-70°	90.9	5.4
70°-80°	45.0	2.7
80°-90°	12.3	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°	747.0	44.1
0°-40°	1116.7	65.9
0°-60°	1546.7	91.3
0°-90°	1695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1695.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1048	1048	1048	1048	1048	
5°	1148	1116	1039	963	930	112
15°	1260	1170	957	752	673	357
25°	1244	1121	804	540	446	561
35°	887	920	557	340	262	556
45°	550	563	318	172	108	426
55°	339	309	153	52	48	305
65°	204	164	62	19	28	204
75°	108	76	19	10	15	117
85°	34	19	3	3	3	38
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°	1047.9	1047.9	1047.9	1047.9	1047.9	1047.9	1047.9	1047.9	1047.9
2.5°	1095.4	1092.5	1083.6	1065.7	1047.9	1027.1	1010.7	998.8	989.9
5°	1147.5	1141.5	1116.3	1079.1	1039.0	998.8	963.2	942.4	930.5
7.5°	1187.6	1177.2	1141.5	1089.5	1027.1	966.1	911.1	878.4	865.1
10°	1221.8	1204.0	1157.9	1088.0	1006.3	926.0	857.6	819.0	804.1
12.5°	1244.1	1224.8	1168.3	1086.5	984.0	885.9	805.6	755.1	740.2
15°	1260.4	1236.7	1169.8	1074.6	957.2	844.3	752.1	692.6	673.3
17.5°	1272.3	1239.6	1163.8	1061.3	933.4	801.1	697.1	633.2	613.9
20°	1275.3	1239.6	1154.9	1041.9	897.8	758.0	637.6	573.7	550.0
22.5°	1276.8	1235.2	1141.5	1018.2	860.6	709.0	588.6	521.7	496.4
25°	1244.1	1220.3	1120.7	978.0	804.1	655.5	539.5	466.7	445.9
27.5°	1166.8	1165.3	1096.9	924.5	752.1	597.5	489.0	419.2	399.8
30°	1088.0	1089.5	1065.7	865.1	691.2	542.5	438.5	370.1	349.3
32.5°	991.4	1006.3	1004.8	798.2	625.8	490.5	389.4	325.5	304.7
35°	887.4	914.1	920.1	722.4	557.4	431.0	340.4	282.4	261.6
37.5°	793.7	820.5	833.8	655.5	493.5	379.0	294.3	243.8	223.0
40°	703.0	725.3	735.7	578.2	431.0	325.5	251.2	203.6	182.8
42.5°	615.4	648.1	645.1	512.8	376.0	282.4	212.5	165.0	144.2
45°	550.0	572.2	563.3	444.4	318.1	237.8	172.4	127.8	108.5
47.5°	484.6	500.9	487.5	386.5	269.0	196.2	139.7	93.6	72.8
50°	431.0	438.5	420.6	328.5	224.4	160.5	105.5	62.4	59.5
52.5°	380.5	385.0	359.7	279.4	185.8	129.3	77.3	49.0	52.0
55°	338.9	337.4	309.2	236.3	153.1	99.6	52.0	44.6	47.6
57.5°	298.8	294.3	266.1	196.2	124.9	77.3	31.2	38.6	41.6
60°	263.1	258.6	225.9	162.0	99.6	58.0	25.3	34.2	37.2
62.5°	234.8	224.4	191.7	133.8	80.3	41.6	22.3	29.7	32.7
65°	203.6	194.7	163.5	108.5	62.4	29.7	19.3	25.3	28.2
67.5°	178.4	168.0	138.2	89.2	50.5	20.8	17.8	22.3	25.3
70°	153.1	144.2	114.4	71.3	37.2	13.4	14.9	19.3	22.3
72.5°	132.3	121.9	95.1	56.5	28.2	10.4	13.4	16.3	17.8
75°	108.5	99.6	75.8	43.1	19.3	8.9	10.4	13.4	14.9
77.5°	90.7	81.7	59.5	32.7	13.4	7.4	8.9	11.9	11.9
80°	69.9	62.4	44.6	22.3	8.9	4.5	7.4	8.9	8.9
82.5°	50.5	44.6	31.2	14.9	4.5	4.5	4.5	5.9	5.9
85°	34.2	29.7	19.3	8.9	3.0	3.0	3.0	3.0	3.0
87.5°	19.3	14.9	8.9	3.0	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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— 0°-180° - - 45°-225° - - - 90°-270°

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