

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: P837470

Luminaire Tested: HCSQ430D010-HM43040940-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837470
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-HM43040940-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

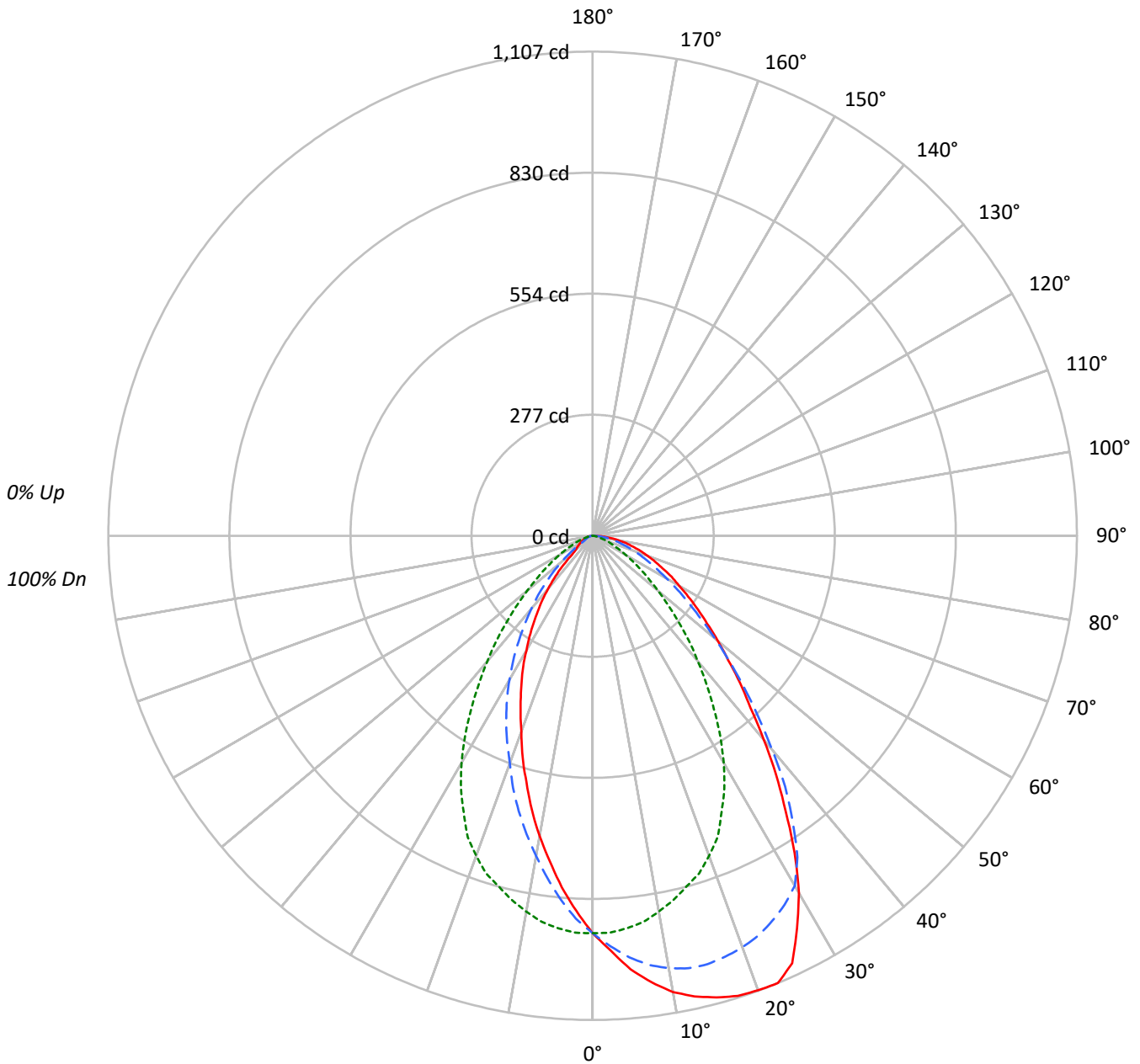
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1469.5 lumens
Efficiency: N/A
Efficacy: 52.1 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°	88011	88011	88011	88011	88011
5°	96740	94114	87599	81200	78448
10°	104203	98754	85818	73148	68583
15°	109600	101717	83233	65401	58551
20°	113990	103227	80237	56990	49155
25°	115292	103855	74524	50003	41324
30°	105520	103361	67028	42530	33872
35°	90980	94338	57145	34899	26822
40°	77079	80670	47259	27543	20044
45°	65323	66912	37785	20482	12892
50°	56321	54964	29328	13790	7762
55°	49622	45264	22413	7617	6959
60°	44195	37956	16721	4243	6239
65°	40459	32504	12401	3851	5616
70°	37587	28098	9120	3654	5467
75°	35221	24591	6288	3369	4828
80°	33808	21590	4296	3570	4296
85°	32901	18674	2890	2890	2890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 67967 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	5.8
10°-20°	234.5	16.0
20°-30°	327.9	22.3
30°-40°	320.5	21.8
40°-50°	232.6	15.8
50°-60°	140.2	9.5
60°-70°	78.8	5.4
70°-80°	39.0	2.7
80°-90°	10.7	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°	647.6	44.1
0°-40°	968.2	65.9
0°-60°	1341.0	91.3
0°-90°	1469.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1469.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	908	908	908	908	908	
5°	995	968	901	835	807	97
15°	1093	1014	830	652	584	309
25°	1079	972	697	468	387	486
35°	769	798	483	295	227	482
45°	477	488	276	150	94	370
55°	294	268	133	45	41	264
65°	176	142	54	17	24	177
75°	94	66	17	9	13	101
85°	30	17	3	3	3	33
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°	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5
2.5°	949.7	947.2	939.4	924.0	908.5	890.5	876.3	866.0	858.2
5°	994.8	989.7	967.8	935.6	900.8	866.0	835.0	817.0	806.7
7.5°	1029.6	1020.6	989.7	944.6	890.5	837.6	789.9	761.6	750.0
10°	1059.3	1043.8	1003.9	943.3	872.4	802.8	743.6	710.0	697.2
12.5°	1078.6	1061.9	1012.9	942.0	853.1	768.0	698.5	654.6	641.8
15°	1092.8	1072.2	1014.2	931.7	829.9	732.0	652.1	600.5	583.8
17.5°	1103.1	1074.7	1009.0	920.1	809.3	694.6	604.4	549.0	532.2
20°	1105.7	1074.7	1001.3	903.3	778.3	657.2	552.8	497.4	476.8
22.5°	1107.0	1070.9	989.7	882.7	746.1	614.7	510.3	452.3	430.4
25°	1078.6	1058.0	971.6	847.9	697.2	568.3	467.8	404.6	386.6
27.5°	1011.6	1010.3	951.0	801.5	652.1	518.0	424.0	363.4	346.6
30°	943.3	944.6	924.0	750.0	599.2	470.4	380.2	320.9	302.8
32.5°	859.5	872.4	871.1	692.0	542.5	425.3	337.6	282.2	264.2
35°	769.3	792.5	797.7	626.3	483.2	373.7	295.1	244.8	226.8
37.5°	688.1	711.3	722.9	568.3	427.8	328.6	255.2	211.3	193.3
40°	609.5	628.9	637.9	501.3	373.7	282.2	217.8	176.5	158.5
42.5°	533.5	561.9	559.3	444.6	326.0	244.8	184.3	143.0	125.0
45°	476.8	496.1	488.4	385.3	275.8	206.2	149.5	110.8	94.1
47.5°	420.1	434.3	422.7	335.1	233.2	170.1	121.1	81.2	63.1
50°	373.7	380.2	364.7	284.8	194.6	139.2	91.5	54.1	51.5
52.5°	329.9	333.8	311.9	242.3	161.1	112.1	67.0	42.5	45.1
55°	293.8	292.5	268.0	204.9	132.7	86.3	45.1	38.7	41.2
57.5°	259.0	255.2	230.7	170.1	108.2	67.0	27.1	33.5	36.1
60°	228.1	224.2	195.9	140.5	86.3	50.3	21.9	29.6	32.2
62.5°	203.6	194.6	166.2	116.0	69.6	36.1	19.3	25.8	28.4
65°	176.5	168.8	141.8	94.1	54.1	25.8	16.8	21.9	24.5
67.5°	154.6	145.6	119.8	77.3	43.8	18.0	15.5	19.3	21.9
70°	132.7	125.0	99.2	61.9	32.2	11.6	12.9	16.8	19.3
72.5°	114.7	105.7	82.5	49.0	24.5	9.0	11.6	14.2	15.5
75°	94.1	86.3	65.7	37.4	16.8	7.7	9.0	11.6	12.9
77.5°	78.6	70.9	51.5	28.4	11.6	6.4	7.7	10.3	10.3
80°	60.6	54.1	38.7	19.3	7.7	3.9	6.4	7.7	7.7
82.5°	43.8	38.7	27.1	12.9	3.9	3.9	3.9	5.2	5.2
85°	29.6	25.8	16.8	7.7	2.6	2.6	2.6	2.6	2.6
87.5°	16.8	12.9	7.7	2.6	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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