

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: P837550

Luminaire Tested: HCSQ440D010-HM43040940-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837550
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: HCSQ440D010-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

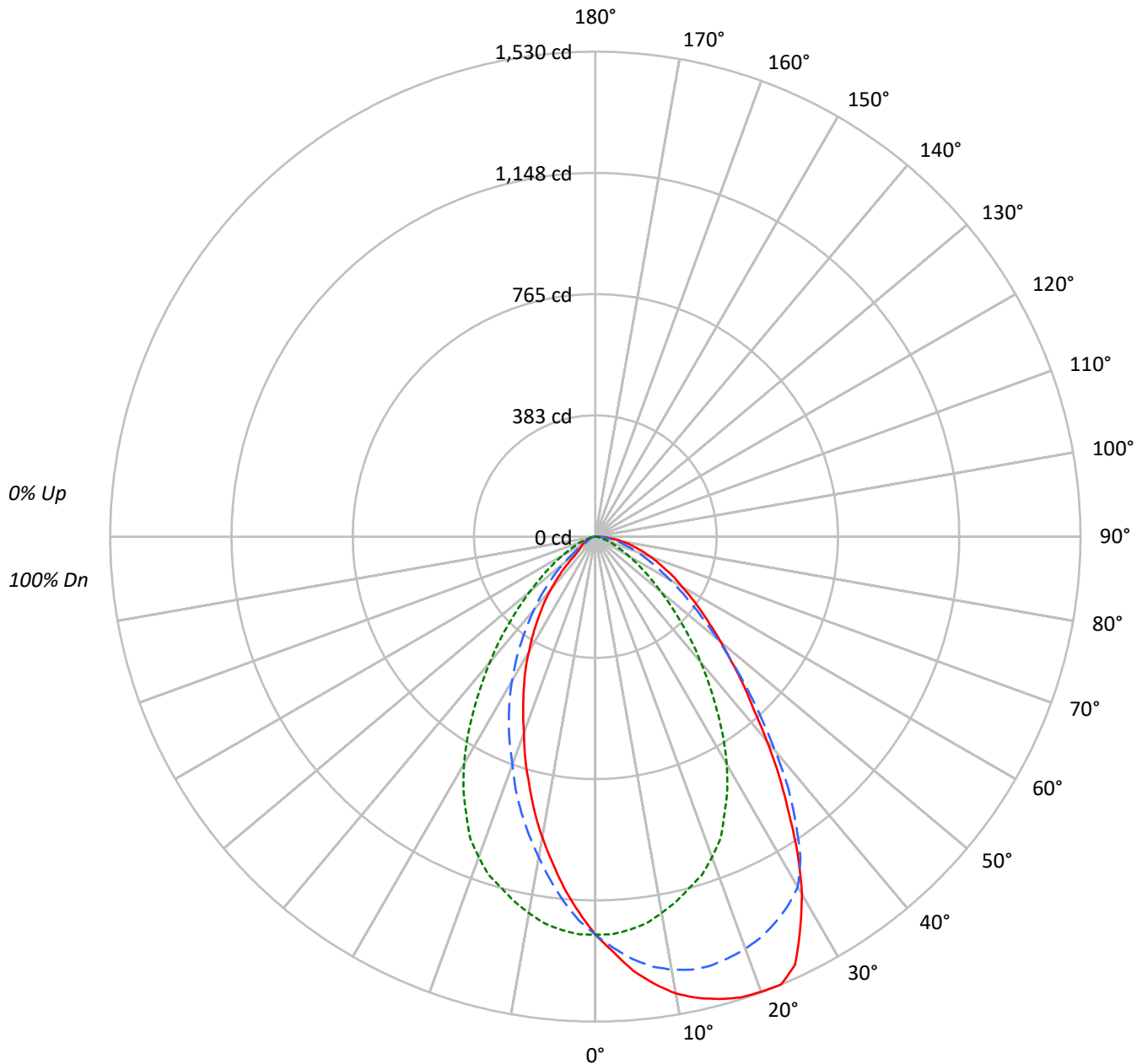
Lumens per Lamp: N/A
Luminaire Lumens: 2031.0 lumens
Efficiency: N/A
Efficacy: 49.5 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): 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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	107	104	101	109	105	102	99		101	99	96			97	95	93			94
2	103	97	91	87	101	95	90	86		92	87	84			88	85	82			86
3	96	87	81	76	94	86	80	75		83	78	74			81	76	72			78
4	89	79	72	67	87	78	71	66		76	70	65			74	69	64			72
5	83	72	65	59	81	71	64	59		69	63	58			68	62	58			66
6	78	66	59	53	76	66	58	53		64	57	53			62	57	52			61
7	73	61	54	48	71	60	53	48		59	53	48			58	52	48			56
8	68	57	49	44	67	56	49	44		55	48	44			54	48	43			52
9	64	53	45	40	63	52	45	40		51	45	40			50	44	40			49
10	61	49	42	37	60	48	42	37		48	41	37			47	41	37			46

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	121637	121637	121637	121637	121637
5°	133713	130076	121061	112231	108419
10°	144014	136478	118614	101095	94779
15°	151472	140580	115036	90384	80916
20°	157536	142670	110897	78773	67938
25°	159341	143543	102989	69105	57111
30°	145835	142848	92644	58772	46814
35°	125749	130385	78988	48240	37075
40°	106531	111489	65318	38065	27708
45°	90285	92477	52212	28305	17810
50°	77842	75959	40526	19065	10731
55°	68589	62576	30976	10522	9627
60°	61070	52448	23114	5871	8622
65°	55931	44906	17146	5318	7748
70°	51947	38833	12604	5042	7563
75°	48659	33986	8684	4679	6663
80°	46695	29791	5969	4965	5969
85°	45572	25787	4001	4001	4001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 93943 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	5.8
10°-20°	324.2	16.0
20°-30°	453.2	22.3
30°-40°	443.0	21.8
40°-50°	321.5	15.8
50°-60°	193.8	9.5
60°-70°	108.9	5.4
70°-80°	53.9	2.7
80°-90°	14.8	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°	895.1	44.1
0°-40°	1338.1	65.9
0°-60°	1853.4	91.3
0°-90°	2031.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2031.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1256	1256	1256	1256	1256	
5°	1375	1338	1245	1154	1115	134
15°	1510	1402	1147	901	807	428
25°	1491	1343	964	646	534	672
35°	1063	1102	668	408	314	666
45°	659	675	381	207	130	511
55°	406	370	183	62	57	365
65°	244	196	75	23	34	244
75°	130	91	23	12	18	140
85°	41	23	4	4	4	45
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°	1255.6	1255.6	1255.6	1255.6	1255.6	1255.6	1255.6	1255.6	1255.6
2.5°	1312.6	1309.1	1298.4	1277.0	1255.6	1230.7	1211.1	1196.9	1186.2
5°	1375.0	1367.8	1337.6	1293.0	1244.9	1196.9	1154.1	1129.2	1114.9
7.5°	1423.1	1410.6	1367.8	1305.5	1230.7	1157.7	1091.8	1052.6	1036.6
10°	1464.0	1442.6	1387.4	1303.7	1205.8	1109.6	1027.7	981.4	963.5
12.5°	1490.7	1467.6	1399.9	1301.9	1179.1	1061.5	965.3	904.8	887.0
15°	1510.3	1481.8	1401.7	1287.7	1147.0	1011.6	901.2	830.0	806.8
17.5°	1524.6	1485.4	1394.6	1271.7	1118.5	960.0	835.3	758.7	735.6
20°	1528.1	1485.4	1383.9	1248.5	1075.7	908.3	764.1	687.5	659.0
22.5°	1529.9	1480.0	1367.8	1220.0	1031.2	849.6	705.3	625.1	594.9
25°	1490.7	1462.2	1342.9	1171.9	963.5	785.4	646.5	559.2	534.3
27.5°	1398.1	1396.3	1314.4	1107.8	901.2	716.0	586.0	502.3	479.1
30°	1303.7	1305.5	1277.0	1036.6	828.2	650.1	525.4	443.5	418.5
32.5°	1188.0	1205.8	1204.0	956.4	749.8	587.7	466.6	390.0	365.1
35°	1063.3	1095.3	1102.5	865.6	667.9	516.5	407.9	338.4	313.5
37.5°	951.1	983.1	999.2	785.4	591.3	454.2	352.6	292.1	267.2
40°	842.4	869.1	881.6	692.8	516.5	390.0	301.0	244.0	219.1
42.5°	737.4	776.5	773.0	614.5	450.6	338.4	254.7	197.7	172.8
45°	659.0	685.7	675.0	532.5	381.1	285.0	206.6	153.2	130.0
47.5°	580.6	600.2	584.2	463.1	322.4	235.1	167.4	112.2	87.3
50°	516.5	525.4	504.0	393.6	268.9	192.4	126.5	74.8	71.2
52.5°	455.9	461.3	431.0	334.8	222.6	155.0	92.6	58.8	62.3
55°	406.1	404.3	370.5	283.2	183.4	119.3	62.3	53.4	57.0
57.5°	358.0	352.6	318.8	235.1	149.6	92.6	37.4	46.3	49.9
60°	315.2	309.9	270.7	194.1	119.3	69.5	30.3	41.0	44.5
62.5°	281.4	268.9	229.8	160.3	96.2	49.9	26.7	35.6	39.2
65°	244.0	233.3	195.9	130.0	74.8	35.6	23.2	30.3	33.8
67.5°	213.7	201.3	165.6	106.9	60.6	24.9	21.4	26.7	30.3
70°	183.4	172.8	137.1	85.5	44.5	16.0	17.8	23.2	26.7
72.5°	158.5	146.0	114.0	67.7	33.8	12.5	16.0	19.6	21.4
75°	130.0	119.3	90.8	51.7	23.2	10.7	12.5	16.0	17.8
77.5°	108.6	98.0	71.2	39.2	16.0	8.9	10.7	14.2	14.2
80°	83.7	74.8	53.4	26.7	10.7	5.3	8.9	10.7	10.7
82.5°	60.6	53.4	37.4	17.8	5.3	5.3	5.3	7.1	7.1
85°	41.0	35.6	23.2	10.7	3.6	3.6	3.6	3.6	3.6
87.5°	23.2	17.8	10.7	3.6	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



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







(END OF REPORT)