

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P284478

Luminaire Tested: **4SNLED-LD5-81HL-SLW-UNV-L830-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P284478
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P#)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 45NLED-LD5-81HL-SLW-UNV-L830-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
SQUARE FROSTED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8003.0 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.56 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

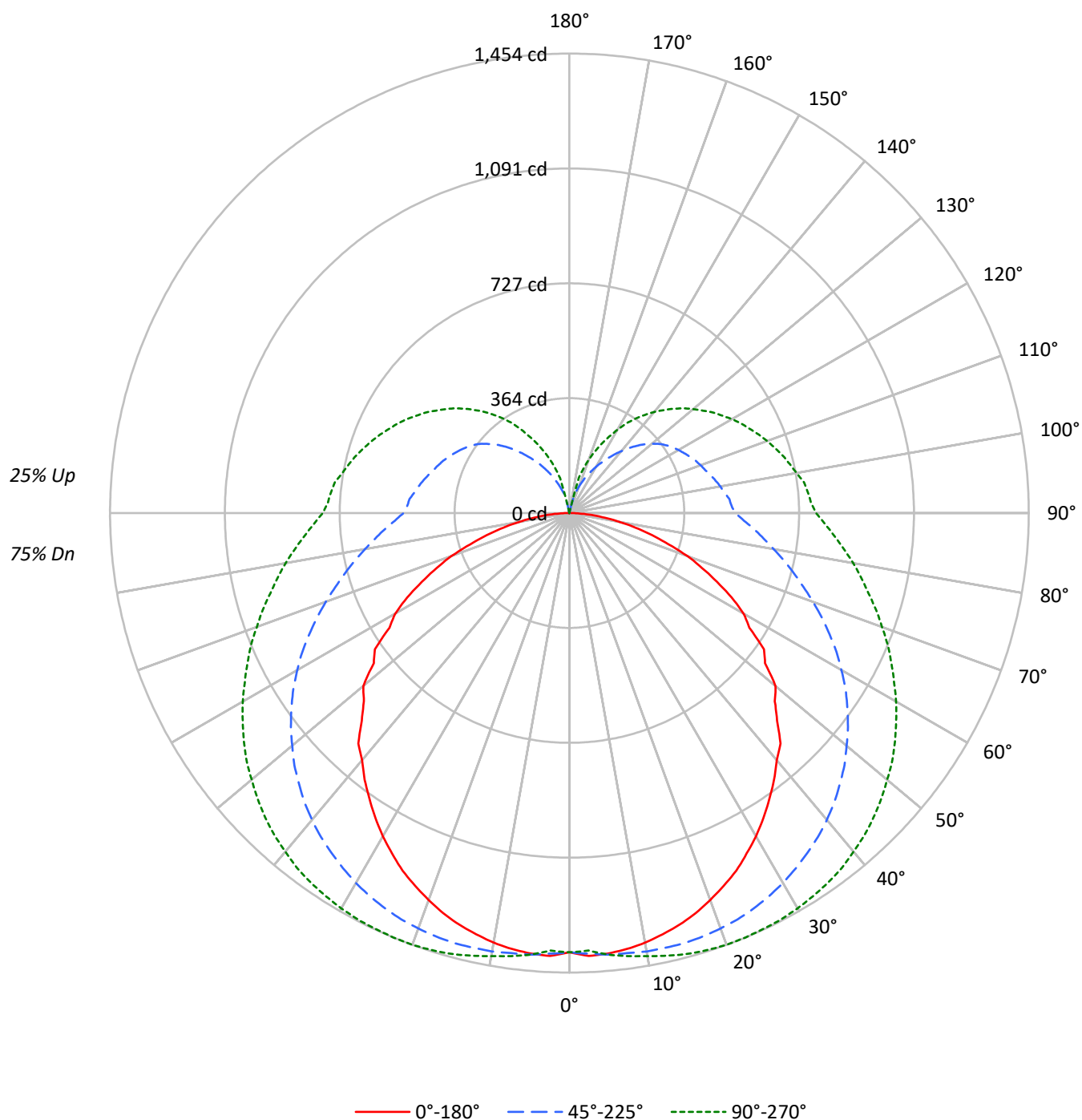
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	30	10	50	30	10
RCR																				
0	113	113	113	113	107	107	107	107	97	97	97	88	88	88	79	79	79			75
1	100	94	89	84	95	89	84	80	80	76	73	72	69	66	64	62	60			56
2	90	80	72	66	85	76	69	63	68	63	58	61	57	53	55	51	48			44
3	81	69	60	53	76	66	58	51	59	53	47	53	48	43	47	43	39			36
4	74	61	51	44	69	58	49	43	52	45	39	47	41	36	42	37	33			30
5	67	54	44	37	63	51	43	36	46	39	33	42	35	31	37	32	28			25
6	62	48	39	32	58	46	37	31	41	34	29	37	31	27	34	28	24			22
7	57	43	34	28	54	41	33	27	37	30	25	34	28	23	30	25	21			19
8	53	39	31	25	50	37	29	24	34	27	22	31	25	21	28	23	19			17
9	49	36	27	22	47	34	26	21	31	24	20	28	23	18	26	21	17			15
10	46	33	25	20	44	31	24	19	29	22	18	26	21	16	24	19	15			13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11233	11233	11233
5°	11318	11099	11017
10°	11264	11002	10956
15°	11187	10942	10979
20°	11081	10892	11000
25°	10976	10852	11017
30°	10824	10819	11076
35°	10656	10780	11151
40°	10495	10774	11224
45°	10297	10747	11314
50°	10327	10725	11403
55°	10144	10725	11538
60°	9773	10731	11695
65°	9231	10745	11914
70°	8634	10825	12248
75°	7578	11074	12743
80°	6400	11608	13563
85°	4748	12689	14763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	1.7
10°-20°	395.9	4.9
20°-30°	629.2	7.9
30°-40°	807.6	10.1
40°-50°	911.9	11.4
50°-60°	930.5	11.6
60°-70°	862.1	10.8
70°-80°	729.8	9.1
80°-90°	582.6	7.3
90°-100°	494.7	6.2
100°-110°	440.8	5.5
110°-120°	375.4	4.7
120°-130°	298.2	3.7
130°-140°	211.5	2.6
140°-150°	126.3	1.6
150°-160°	58.9	0.7
160°-170°	14.0	0.2
170°-180°	0.0	0.0
0°-30°	1158.7	14.5
0°-40°	1966.3	24.6
0°-60°	3808.8	47.6
0°-90°	5983.3	74.8
90°-120°	1310.9	16.4
90°-150°	1946.8	24.3
90°-180°	2020.0	25.2
0°-180°	8003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1399	1388	1403	1403	1403	133
15°	1348	1360	1409	1435	1444	380
25°	1249	1290	1380	1429	1452	575
35°	1104	1185	1313	1394	1428	691
45°	929	1055	1211	1316	1362	722
55°	752	878	1074	1205	1258	660
65°	515	687	908	1064	1125	511
75°	271	480	735	916	980	288
85°	70	308	587	776	842	76
90°	4	252	525	714	780	6
95°	0	237	508	694	758	0
105°	0	218	463	637	700	0
115°	0	203	421	573	630	0
125°	0	175	374	506	555	0
135°	0	130	301	427	466	0
145°	0	85	211	320	365	1
155°	2	53	130	195	243	1
165°	2	28	58	81	115	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P284478

CATALOG NUMBER: 4SNLED-LD5-81HL-SLW-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.0	1390.0	1390.0	1390.0	1390.0
2.5°	1402.7	1387.9	1395.6	1393.5	1385.9
5°	1399.1	1387.9	1402.7	1402.7	1402.7
7.5°	1391.5	1383.9	1404.7	1412.3	1414.3
10°	1380.3	1380.3	1408.7	1419.9	1423.5
12.5°	1365.1	1370.7	1408.7	1425.5	1434.6
15°	1348.4	1359.5	1408.7	1434.6	1444.3
17.5°	1327.6	1346.3	1404.7	1436.7	1449.9
20°	1303.2	1331.6	1399.1	1436.7	1453.9
22.5°	1276.8	1312.8	1391.5	1433.1	1453.9
25°	1248.9	1290.0	1380.3	1429.0	1451.9
27.5°	1214.9	1267.7	1367.1	1423.5	1449.9
30°	1180.9	1241.3	1351.9	1415.9	1444.3
32.5°	1143.3	1212.9	1333.1	1404.7	1436.7
35°	1103.8	1185.0	1312.8	1393.5	1427.5
37.5°	1064.2	1150.9	1292.0	1378.3	1415.9
40°	1021.0	1116.9	1267.7	1359.5	1399.1
42.5°	989.1	1081.4	1241.3	1340.7	1382.4
45°	929.2	1055.0	1210.8	1316.4	1361.6
47.5°	882.0	1004.3	1180.9	1292.0	1338.7
50°	852.0	962.7	1145.4	1263.6	1312.8
52.5°	780.5	934.8	1111.4	1235.7	1288.0
55°	752.1	878.4	1073.8	1205.2	1258.0
57.5°	674.9	838.9	1036.3	1171.8	1226.1
60°	637.4	784.0	994.6	1137.8	1194.1
62.5°	579.0	737.4	953.5	1100.2	1158.6
65°	515.1	686.6	908.4	1064.2	1124.6
67.5°	455.2	635.9	865.2	1026.6	1090.6
70°	396.8	583.1	820.1	989.1	1053.0
72.5°	328.8	530.3	776.4	953.5	1017.5
75°	271.0	479.6	735.3	916.0	979.9
77.5°	214.2	430.8	695.7	882.0	945.9
80°	161.9	383.6	656.2	846.5	911.9
82.5°	112.7	344.1	620.6	812.5	876.4
85°	69.5	308.5	586.6	776.4	842.4
87.5°	32.0	276.6	552.6	742.9	810.4
90°	3.6	252.2	524.7	714.5	780.5
92.5°	2.0	244.6	513.6	701.3	765.3
95°	0.0	237.0	508.0	693.7	757.7
97.5°	0.0	229.4	494.8	682.6	748.5
100°	0.0	225.8	485.1	665.8	729.7
102.5°	0.0	220.2	474.0	650.6	714.5
105°	0.0	218.2	462.8	637.4	699.8
107.5°	0.0	214.2	451.1	620.6	682.6
110°	0.0	210.6	442.0	605.4	665.8



TEST NUMBER: P284478

CATALOG NUMBER: 4SNLED-LD5-81HL-SLW-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	207.0	432.4	590.7	648.6
115°	0.0	203.0	421.2	573.4	629.8
117.5°	0.0	197.4	410.0	556.7	613.0
120°	0.0	189.8	398.9	541.5	594.3
122.5°	0.0	182.2	387.2	522.7	573.4
125°	0.0	175.1	374.0	506.0	554.7
127.5°	0.0	163.4	359.3	487.2	532.3
130°	0.0	152.2	340.5	468.4	511.5
132.5°	2.0	141.1	321.7	447.6	490.7
135°	0.0	129.9	300.9	426.8	466.4
137.5°	0.0	120.3	278.1	404.5	442.0
140°	0.0	109.1	255.8	378.1	417.7
142.5°	0.0	95.9	233.4	349.6	391.3
145°	0.0	84.7	210.6	319.7	364.9
147.5°	2.0	75.1	189.8	287.7	336.5
150°	2.0	67.5	169.5	255.8	304.5
152.5°	2.0	60.4	148.7	225.8	272.5
155°	2.0	52.8	129.9	195.4	242.6
157.5°	2.0	45.2	109.1	165.4	210.6
160°	2.0	39.6	90.3	139.0	180.7
162.5°	2.0	34.0	73.6	109.1	148.7
165°	2.0	28.4	58.4	80.7	114.7
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)