

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: P473784

Luminaire Tested: **24CZ2-40VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473784
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40VHE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

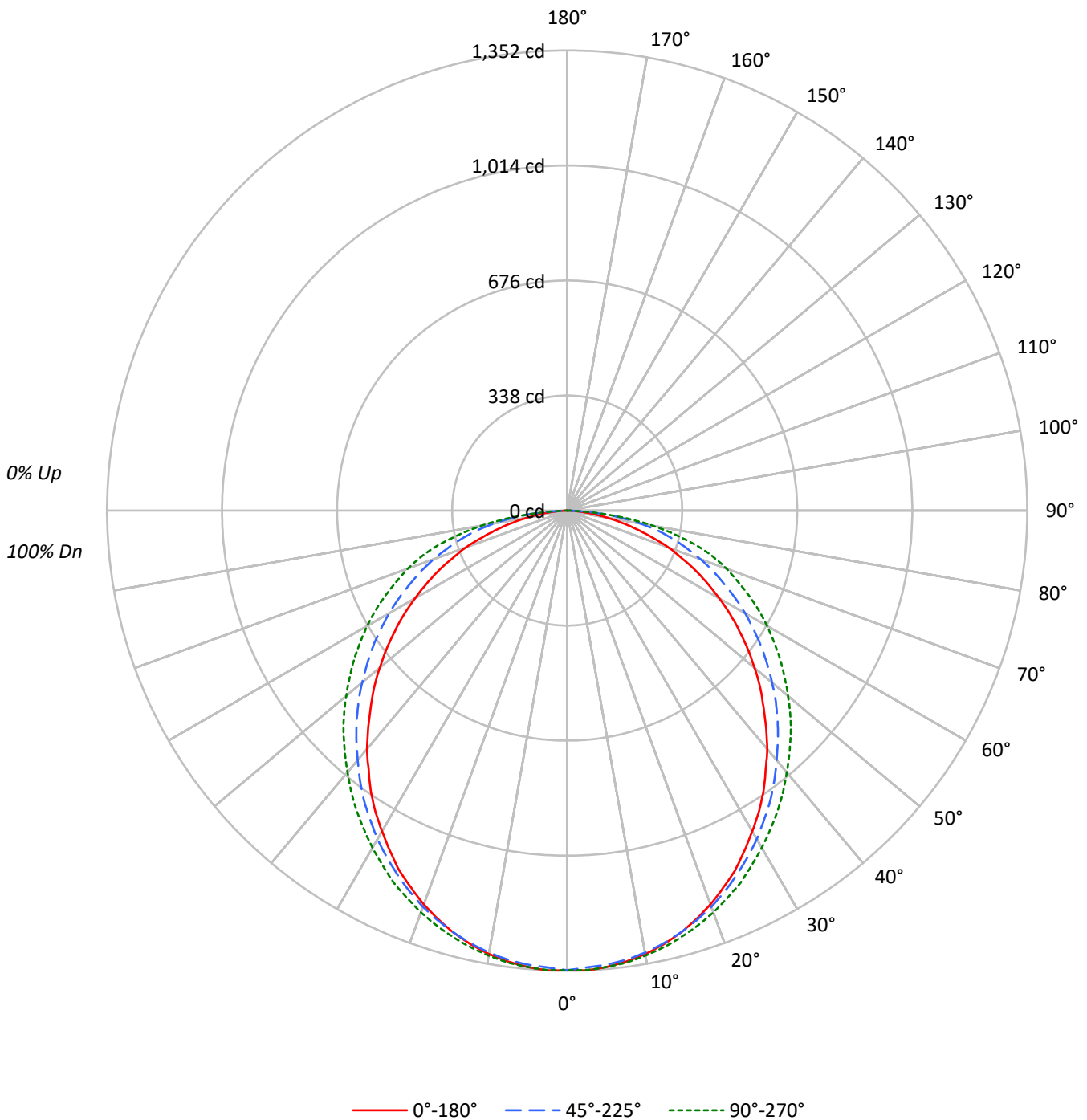
Lumens per Lamp: N/A
Luminaire Lumens: 3908.2 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 27.3
Input Voltage (V): 120
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	0
RW	70	50	30	10	70	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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1817	1817	1817
5°	1818	1809	1818
10°	1808	1802	1814
15°	1790	1789	1807
20°	1763	1774	1799
25°	1732	1752	1790
30°	1690	1731	1778
35°	1652	1709	1770
40°	1607	1681	1763
45°	1552	1664	1768
50°	1505	1645	1774
55°	1450	1634	1794
60°	1390	1626	1826
65°	1325	1620	1873
70°	1247	1637	1960
75°	1096	1671	2038
80°	915	1683	1967
85°	653	1442	1462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	3.3
10°-20°	363.6	9.3
20°-30°	545.5	14.0
30°-40°	651.3	16.7
40°-50°	674.6	17.3
50°-60°	621.1	15.9
60°-70°	501.0	12.8
70°-80°	327.4	8.4
80°-90°	96.0	2.5
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°	1036.8	26.5
0°-40°	1688.2	43.2
0°-60°	2983.9	76.3
0°-90°	3908.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3908.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1346	1345	1339	1347	1346	128
15°	1285	1285	1284	1297	1297	362
25°	1167	1169	1180	1202	1206	536
35°	1006	1015	1040	1069	1078	628
45°	816	836	874	914	929	631
55°	618	645	696	748	765	553
65°	416	444	509	567	588	411
75°	211	251	321	377	392	225
85°	42	73	93	99	95	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.5	1350.5	1350.5	1350.5	1350.5
2.5°	1352.4	1350.5	1343.6	1351.8	1351.2
5°	1346.1	1344.8	1339.2	1346.7	1346.1
7.5°	1336.0	1335.4	1331.0	1339.2	1339.2
10°	1323.4	1322.1	1319.0	1328.4	1327.8
12.5°	1305.7	1305.1	1303.2	1314.5	1313.9
15°	1284.9	1284.9	1284.2	1296.9	1296.9
17.5°	1259.6	1260.2	1262.8	1277.3	1277.9
20°	1231.2	1233.7	1238.8	1255.2	1256.4
22.5°	1199.0	1204.0	1211.0	1229.3	1231.2
25°	1166.8	1169.3	1180.1	1201.5	1205.9
27.5°	1127.6	1134.0	1147.9	1169.9	1174.4
30°	1087.9	1096.7	1114.4	1137.1	1144.1
32.5°	1048.7	1056.3	1077.1	1103.0	1111.2
35°	1005.8	1014.6	1040.5	1068.9	1077.8
37.5°	958.4	972.3	999.5	1032.3	1041.8
40°	914.9	927.5	957.2	993.8	1003.9
42.5°	865.0	880.8	916.8	954.0	966.6
45°	815.7	835.9	874.5	913.6	929.4
47.5°	769.7	786.1	831.5	875.7	889.6
50°	719.1	738.1	786.1	832.8	847.3
52.5°	669.3	692.0	740.6	789.9	805.6
55°	618.1	644.6	696.4	747.6	764.6
57.5°	568.9	595.4	649.1	703.4	721.0
60°	516.5	544.9	604.2	656.6	678.7
62.5°	466.0	494.4	556.9	613.7	634.5
65°	416.1	444.5	508.9	567.0	588.4
67.5°	364.3	395.2	464.1	520.3	541.1
70°	317.0	346.6	416.1	476.1	498.2
72.5°	262.7	298.0	368.7	428.1	448.9
75°	210.9	250.7	321.4	376.9	392.1
77.5°	162.9	202.7	273.4	315.1	324.5
80°	118.1	158.5	217.2	246.2	253.8
82.5°	76.4	118.1	157.2	176.8	179.3
85°	42.3	73.2	93.4	99.1	94.7
87.5°	15.2	27.8	27.1	22.1	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)