

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: P473764

Luminaire Tested: **24CZ2-45-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473764
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4348.2 lumens
Efficiency: N/A
Efficacy: 124.6 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

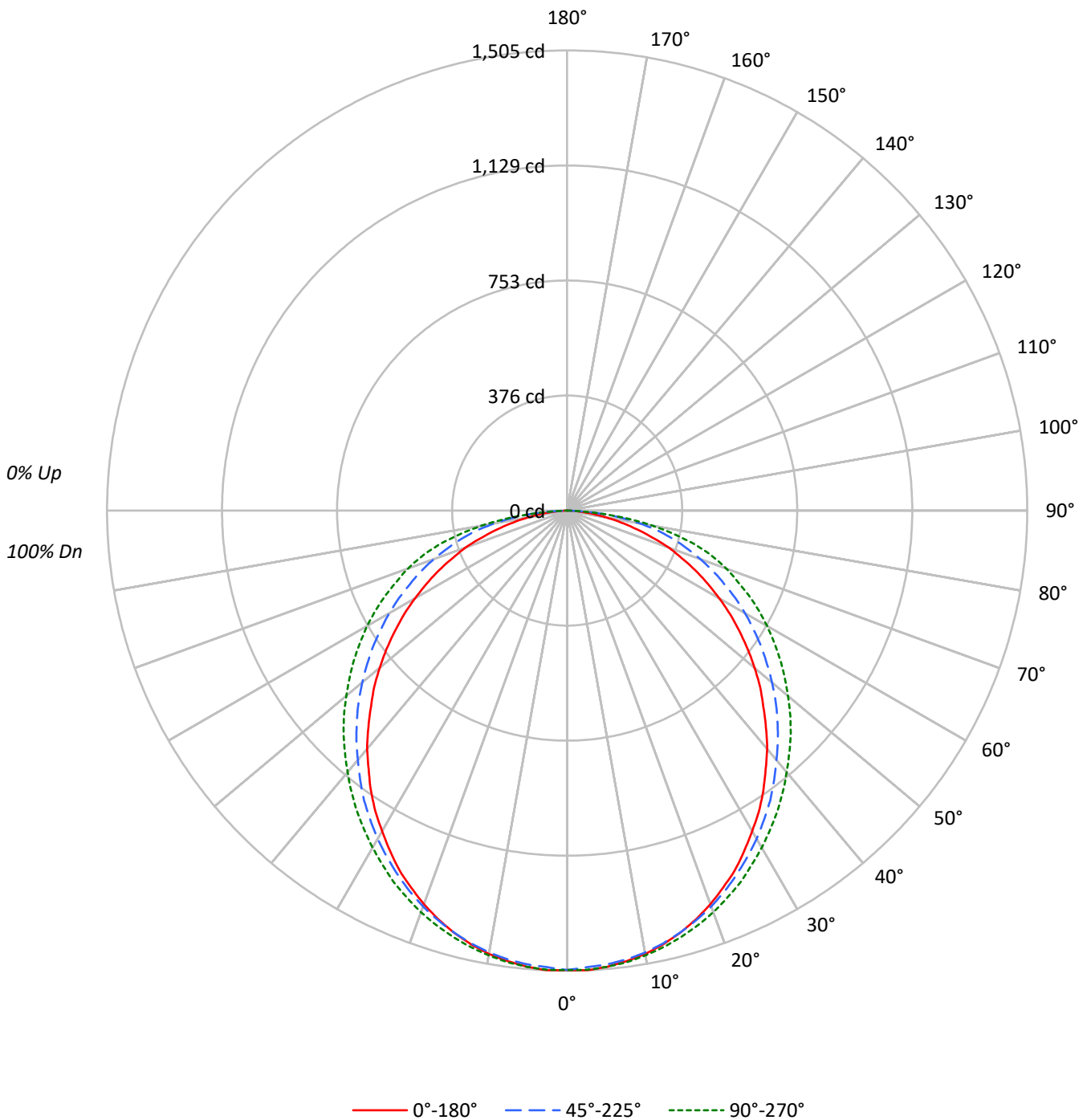
Input Watts (W): 34.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2022	2022	2022
5°	2023	2012	2023
10°	2012	2005	2018
15°	1991	1990	2010
20°	1961	1973	2002
25°	1927	1949	1992
30°	1881	1926	1978
35°	1838	1902	1970
40°	1788	1870	1962
45°	1727	1851	1968
50°	1675	1831	1973
55°	1613	1818	1996
60°	1546	1809	2032
65°	1474	1803	2084
70°	1387	1821	2180
75°	1220	1859	2268
80°	1018	1872	2188
85°	727	1606	1627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.0	3.3
10°-20°	404.6	9.3
20°-30°	607.0	14.0
30°-40°	724.6	16.7
40°-50°	750.6	17.3
50°-60°	691.0	15.9
60°-70°	557.4	12.8
70°-80°	364.2	8.4
80°-90°	106.8	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°	1153.6	26.5
0°-40°	1878.2	43.2
0°-60°	3319.8	76.3
0°-90°	4348.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4348.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1498	1496	1490	1498	1498	142
15°	1430	1430	1429	1443	1443	403
25°	1298	1301	1313	1337	1342	597
35°	1119	1129	1158	1189	1199	699
45°	908	930	973	1016	1034	702
55°	688	717	775	832	851	615
65°	463	494	566	631	655	458
75°	235	279	358	419	436	250
85°	47	82	104	110	105	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1502.6	1502.6	1502.6	1502.6	1502.6
2.5°	1504.7	1502.6	1494.9	1504.0	1503.3
5°	1497.7	1496.3	1489.9	1498.4	1497.7
7.5°	1486.4	1485.7	1480.8	1489.9	1489.9
10°	1472.4	1471.0	1467.5	1478.0	1477.3
12.5°	1452.7	1452.0	1449.9	1462.5	1461.8
15°	1429.5	1429.5	1428.8	1442.9	1442.9
17.5°	1401.4	1402.1	1404.9	1421.1	1421.8
20°	1369.8	1372.6	1378.2	1396.5	1397.9
22.5°	1334.0	1339.6	1347.3	1367.7	1369.8
25°	1298.2	1301.0	1312.9	1336.8	1341.7
27.5°	1254.6	1261.6	1277.1	1301.7	1306.6
30°	1210.4	1220.2	1239.9	1265.1	1272.9
32.5°	1166.8	1175.2	1198.4	1227.2	1236.3
35°	1119.0	1128.9	1157.7	1189.3	1199.1
37.5°	1066.3	1081.8	1112.0	1148.5	1159.1
40°	1017.9	1031.9	1064.9	1105.7	1116.9
42.5°	962.4	979.9	1020.0	1061.4	1075.5
45°	907.6	930.1	972.9	1016.5	1034.0
47.5°	856.3	874.6	925.2	974.3	989.8
50°	800.1	821.2	874.6	926.6	942.7
52.5°	744.6	769.9	824.0	878.8	896.4
55°	687.7	717.2	774.8	831.7	850.7
57.5°	632.9	662.4	722.1	782.6	802.2
60°	574.6	606.2	672.3	730.6	755.2
62.5°	518.4	550.0	619.6	682.8	706.0
65°	462.9	494.5	566.2	630.8	654.7
67.5°	405.3	439.7	516.3	578.8	602.0
70°	352.6	385.7	462.9	529.7	554.2
72.5°	292.2	331.6	410.2	476.3	499.5
75°	234.6	278.9	357.6	419.4	436.2
77.5°	181.2	225.5	304.2	350.5	361.1
80°	131.4	176.3	241.6	274.0	282.4
82.5°	85.0	131.4	174.9	196.7	199.5
85°	47.1	81.5	104.0	110.3	105.4
87.5°	16.9	30.9	30.2	24.6	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)