

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: P474013

Luminaire Tested: **24CZ2-40-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474013
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

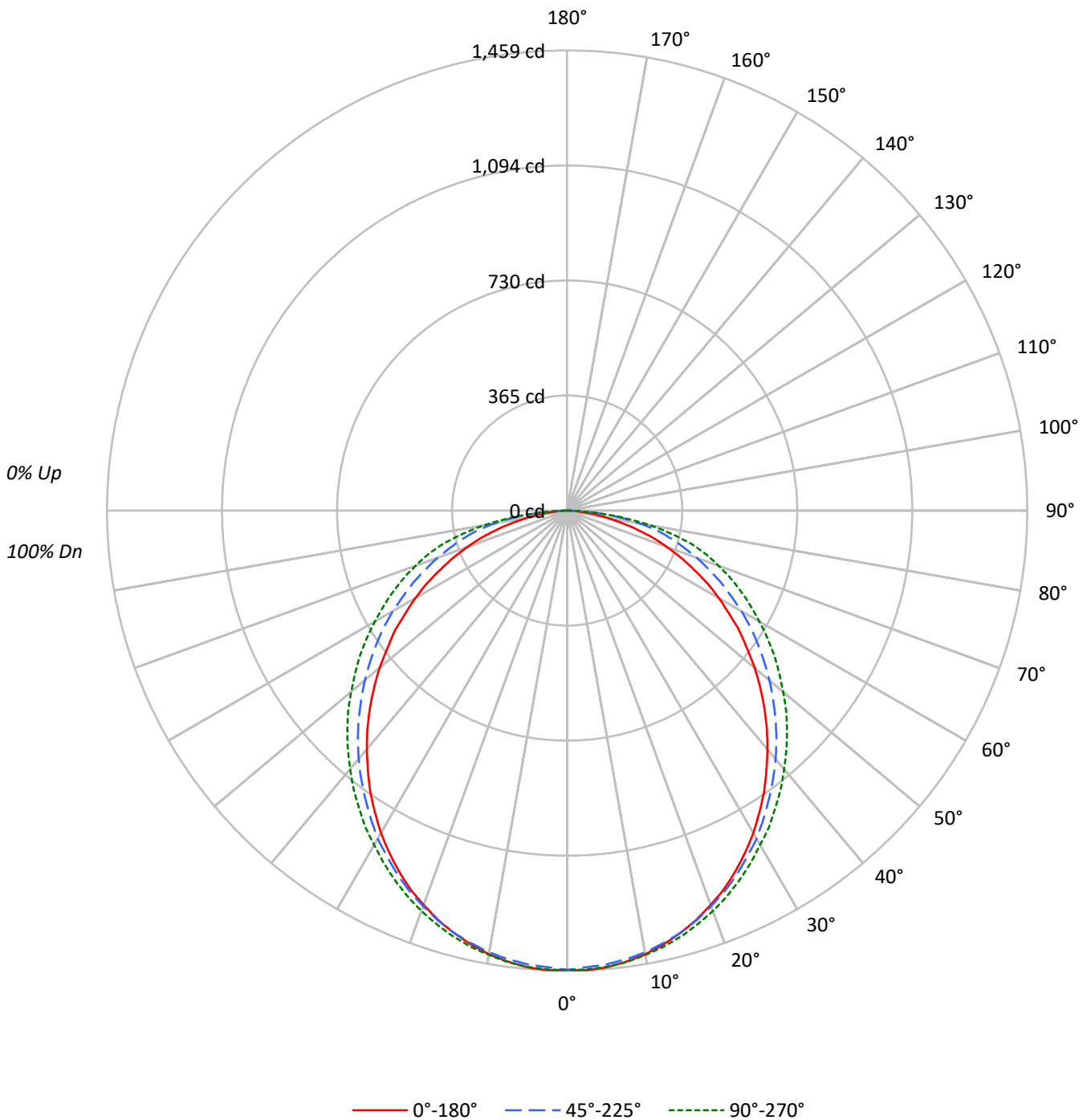
Lumens per Lamp: N/A
Luminaire Lumens: 4172.9 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.6
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	90	83	77	95	88	81	76	84	79	74		81	76	72		78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62		71	65	61		68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26		37	30	25		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1960	1960	1960
5°	1963	1951	1961
10°	1952	1943	1954
15°	1931	1930	1947
20°	1905	1911	1934
25°	1873	1890	1919
30°	1834	1866	1901
35°	1788	1833	1890
40°	1735	1806	1879
45°	1682	1778	1875
50°	1626	1753	1871
55°	1568	1732	1881
60°	1496	1715	1894
65°	1416	1709	1940
70°	1321	1718	2009
75°	1176	1768	2116
80°	962	1805	2066
85°	678	1576	1609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	3.3
10°-20°	392.2	9.4
20°-30°	587.9	14.1
30°-40°	700.2	16.8
40°-50°	721.9	17.3
50°-60°	658.8	15.8
60°-70°	526.8	12.6
70°-80°	344.1	8.2
80°-90°	103.3	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°	1117.8	26.8
0°-40°	1817.9	43.6
0°-60°	3198.7	76.7
0°-90°	4172.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4172.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1453	1450	1444	1453	1452	138
15°	1387	1387	1386	1398	1398	391
25°	1262	1264	1273	1291	1293	581
35°	1088	1096	1116	1144	1151	680
45°	884	900	934	973	986	682
55°	668	688	738	787	802	595
65°	445	475	537	590	609	441
75°	226	264	340	395	407	240
85°	44	79	102	104	104	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1456.5	1456.5	1456.5	1456.5	1456.5
2.5°	1458.6	1456.5	1449.0	1457.9	1456.5
5°	1453.1	1450.3	1444.2	1453.1	1451.7
7.5°	1442.1	1440.7	1434.6	1444.9	1443.5
10°	1428.4	1427.0	1422.2	1432.5	1430.5
12.5°	1409.2	1408.5	1405.1	1417.4	1416.1
15°	1386.6	1387.3	1385.9	1397.6	1397.6
17.5°	1360.6	1359.9	1362.6	1377.0	1375.6
20°	1330.4	1331.1	1334.5	1351.0	1351.0
22.5°	1298.9	1298.2	1305.7	1322.2	1323.5
25°	1261.9	1263.9	1272.8	1291.3	1292.7
27.5°	1222.1	1225.5	1236.5	1257.7	1259.8
30°	1180.3	1184.4	1200.9	1220.7	1223.5
32.5°	1134.4	1143.3	1158.4	1183.7	1190.6
35°	1088.4	1096.0	1115.9	1144.0	1150.8
37.5°	1037.7	1050.1	1072.7	1103.5	1112.4
40°	987.7	1000.0	1028.1	1060.3	1069.9
42.5°	937.0	950.0	982.2	1018.5	1028.8
45°	884.2	900.0	934.2	973.3	985.6
47.5°	830.0	848.5	885.6	928.1	941.8
50°	776.6	795.1	837.6	881.4	893.8
52.5°	719.0	742.3	787.5	834.8	847.2
55°	668.3	687.5	738.2	786.9	801.9
57.5°	608.7	634.7	688.8	738.2	752.6
60°	555.9	579.9	637.4	687.5	703.9
62.5°	502.4	527.1	584.7	641.6	656.6
65°	444.8	475.0	536.7	589.5	609.3
67.5°	390.0	421.5	484.6	540.8	561.4
70°	335.9	368.1	436.6	494.2	510.6
72.5°	282.4	316.0	387.3	443.5	462.7
75°	226.2	263.9	340.0	394.8	407.1
77.5°	173.4	215.2	292.0	329.0	337.9
80°	124.1	170.0	233.0	259.8	266.6
82.5°	81.6	126.1	174.1	188.5	186.4
85°	43.9	78.8	102.1	104.2	104.2
87.5°	17.1	31.5	32.2	24.7	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)