

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: P473863

Luminaire Tested: **24CZ2-40-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473863
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

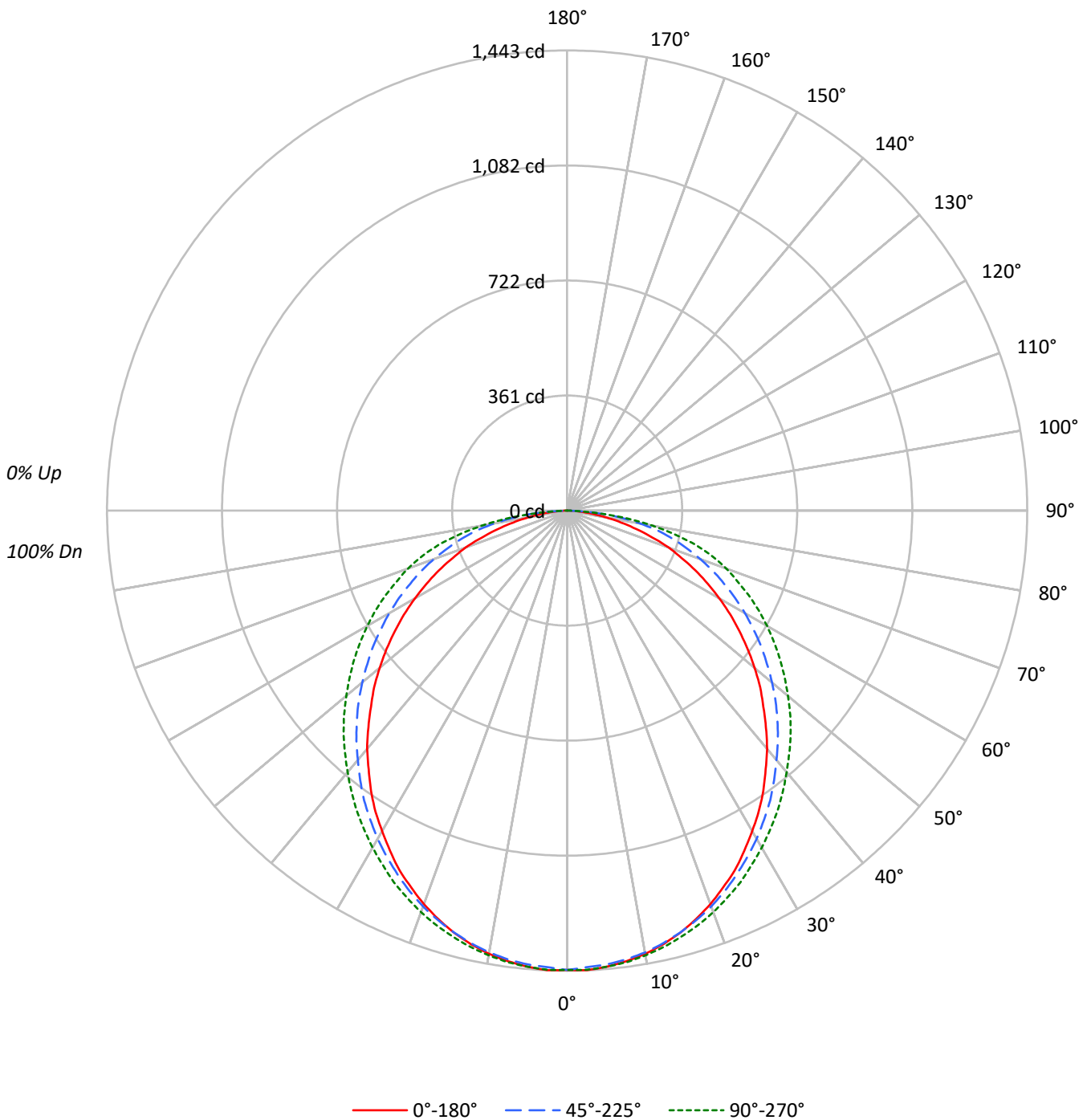
Lumens per Lamp: N/A
Luminaire Lumens: 4168.7 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	1938	1938	1938
5°	1939	1929	1939
10°	1929	1922	1935
15°	1909	1908	1927
20°	1880	1892	1919
25°	1848	1869	1910
30°	1803	1847	1896
35°	1762	1823	1888
40°	1714	1793	1881
45°	1656	1775	1886
50°	1606	1755	1892
55°	1547	1742	1913
60°	1482	1734	1948
65°	1413	1728	1998
70°	1330	1746	2090
75°	1169	1782	2174
80°	976	1795	2097
85°	696	1539	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	3.3
10°-20°	387.9	9.3
20°-30°	581.9	14.0
30°-40°	694.7	16.7
40°-50°	719.6	17.3
50°-60°	662.5	15.9
60°-70°	534.4	12.8
70°-80°	349.2	8.4
80°-90°	102.4	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°	1105.9	26.5
0°-40°	1800.7	43.2
0°-60°	3182.8	76.3
0°-90°	4168.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4168.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1436	1434	1428	1436	1436	136
15°	1370	1370	1370	1383	1383	386
25°	1245	1247	1259	1282	1286	572
35°	1073	1082	1110	1140	1150	670
45°	870	892	933	974	991	673
55°	659	688	743	797	816	590
65°	444	474	543	605	628	439
75°	225	267	343	402	418	240
85°	45	78	100	106	101	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1440.5	1440.5	1440.5	1440.5	1440.5
2.5°	1442.6	1440.5	1433.1	1441.9	1441.2
5°	1435.8	1434.5	1428.4	1436.5	1435.8
7.5°	1425.0	1424.4	1419.7	1428.4	1428.4
10°	1411.6	1410.2	1406.9	1417.0	1416.3
12.5°	1392.7	1392.0	1390.0	1402.1	1401.5
15°	1370.5	1370.5	1369.8	1383.3	1383.3
17.5°	1343.6	1344.2	1346.9	1362.4	1363.1
20°	1313.3	1315.9	1321.3	1338.8	1340.2
22.5°	1278.9	1284.3	1291.7	1311.2	1313.3
25°	1244.6	1247.3	1258.7	1281.6	1286.3
27.5°	1202.8	1209.5	1224.4	1247.9	1252.6
30°	1160.4	1169.8	1188.7	1212.9	1220.3
32.5°	1118.6	1126.7	1148.9	1176.5	1185.3
35°	1072.8	1082.3	1109.9	1140.2	1149.6
37.5°	1022.3	1037.1	1066.1	1101.1	1111.2
40°	975.8	989.3	1021.0	1060.0	1070.8
42.5°	922.6	939.5	977.9	1017.6	1031.1
45°	870.1	891.7	932.7	974.5	991.3
47.5°	821.0	838.5	886.9	934.1	948.9
50°	767.1	787.3	838.5	888.3	903.8
52.5°	713.9	738.1	790.0	842.5	859.3
55°	659.3	687.6	742.8	797.4	815.6
57.5°	606.8	635.1	692.3	750.2	769.1
60°	550.9	581.2	644.5	700.4	724.0
62.5°	497.0	527.3	594.0	654.6	676.8
65°	443.8	474.1	542.8	604.8	627.7
67.5°	388.6	421.6	495.0	554.9	577.2
70°	338.1	369.7	443.8	507.8	531.4
72.5°	280.2	317.9	393.3	456.6	478.8
75°	224.9	267.4	342.8	402.1	418.2
77.5°	173.8	216.2	291.6	336.1	346.2
80°	125.9	169.0	231.7	262.7	270.7
82.5°	81.5	125.9	167.7	188.6	191.3
85°	45.1	78.1	99.7	105.7	101.0
87.5°	16.2	29.6	29.0	23.6	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)