

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: P474663

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474663
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

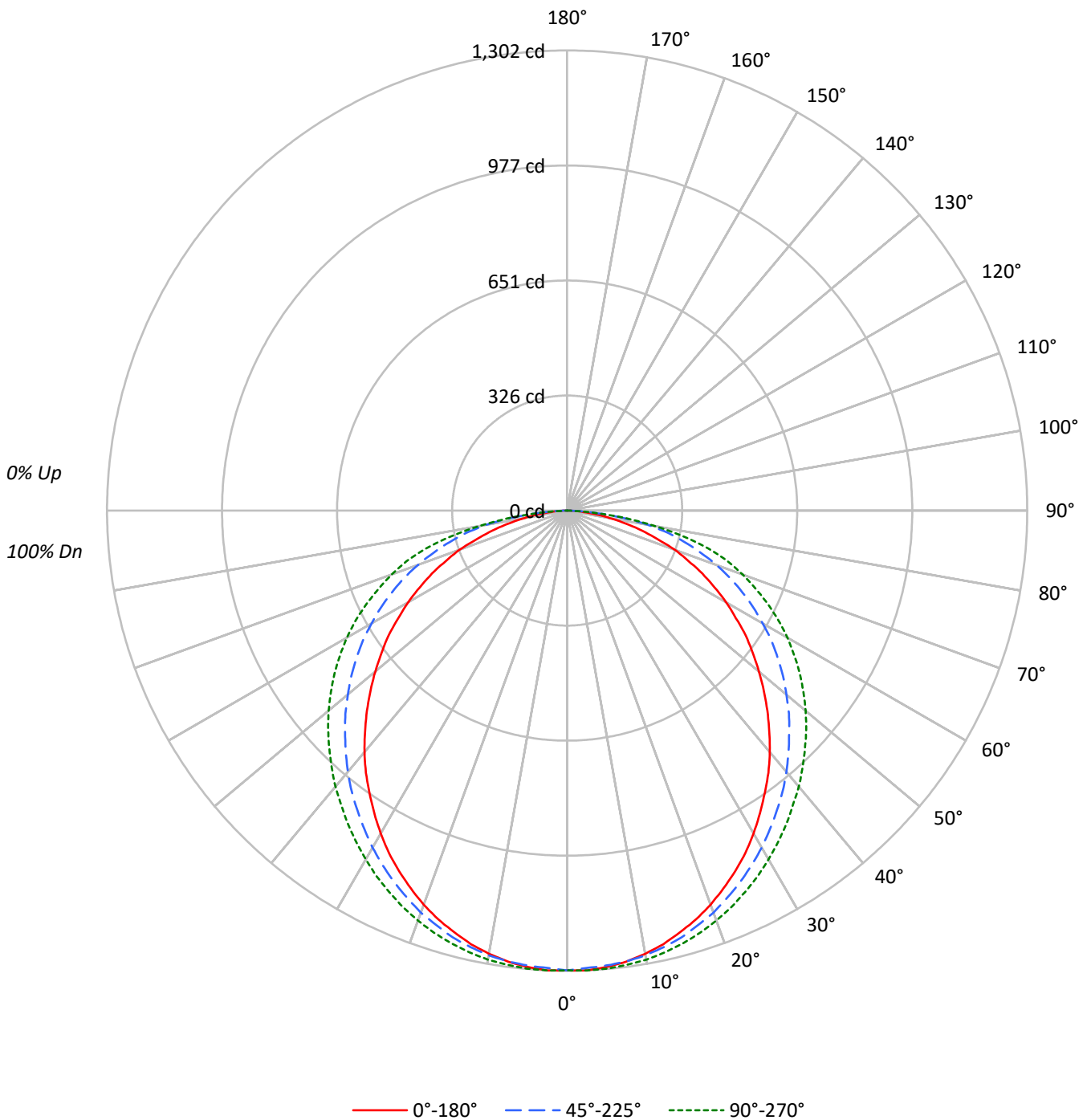
Lumens per Lamp: N/A
Luminaire Lumens: 3960.5 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3501	3501	3501
5°	3500	3490	3514
10°	3479	3491	3525
15°	3441	3483	3531
20°	3397	3466	3535
25°	3342	3442	3536
30°	3278	3421	3541
35°	3203	3401	3554
40°	3134	3390	3583
45°	3048	3381	3621
50°	2967	3391	3687
55°	2898	3414	3770
60°	2799	3440	3876
65°	2687	3481	3992
70°	2549	3530	4152
75°	2283	3579	4289
80°	1922	3589	3893
85°	1426	2717	2560



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.3	3.1
10°-20°	353.3	8.9
20°-30°	534.9	13.5
30°-40°	647.0	16.3
40°-50°	683.0	17.2
50°-60°	644.0	16.3
60°-70°	531.0	13.4
70°-80°	348.3	8.8
80°-90°	95.8	2.4
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°	1011.4	25.5
0°-40°	1658.5	41.9
0°-60°	2985.5	75.4
0°-90°	3960.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3960.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1296	1296	1292	1301	1301	123
15°	1235	1242	1250	1265	1267	348
25°	1126	1140	1159	1183	1191	518
35°	975	1000	1035	1071	1082	610
45°	801	837	888	936	952	618
55°	618	661	728	782	804	550
65°	422	473	547	605	627	417
75°	220	276	344	399	412	232
85°	46	80	88	85	83	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.9	1300.9	1300.9	1300.9	1300.9
2.5°	1302.2	1300.9	1295.2	1302.8	1302.2
5°	1295.8	1295.8	1292.0	1300.9	1300.9
7.5°	1287.0	1287.6	1286.4	1296.5	1296.5
10°	1273.1	1275.6	1277.5	1288.9	1290.1
12.5°	1256.6	1261.0	1264.8	1278.8	1280.0
15°	1235.1	1242.1	1250.3	1264.8	1267.4
17.5°	1213.0	1221.2	1230.0	1249.0	1252.2
20°	1186.4	1195.9	1210.4	1229.4	1234.5
22.5°	1156.6	1169.9	1185.1	1207.9	1214.2
25°	1125.6	1139.6	1159.2	1183.2	1190.8
27.5°	1092.1	1108.6	1130.7	1158.5	1166.8
30°	1054.8	1073.8	1101.0	1130.7	1139.6
32.5°	1015.5	1037.7	1068.1	1101.0	1111.1
35°	975.0	1000.4	1035.2	1070.6	1082.0
37.5°	935.2	960.5	1001.6	1039.0	1049.7
40°	892.2	920.0	964.9	1004.8	1020.0
42.5°	846.6	879.5	927.0	971.2	985.8
45°	801.0	837.1	888.4	935.8	951.6
47.5°	754.9	794.7	851.0	899.1	917.5
50°	708.7	751.1	809.9	861.8	880.8
52.5°	661.8	706.1	770.0	825.1	842.2
55°	617.6	661.2	727.6	782.1	803.6
57.5°	566.3	615.7	685.9	740.9	761.8
60°	520.1	568.2	639.1	697.3	720.1
62.5°	470.1	519.5	594.1	652.4	674.5
65°	422.0	472.7	546.7	604.9	627.0
67.5°	370.2	423.3	499.2	555.5	577.1
70°	324.0	373.9	448.6	506.2	527.7
72.5°	267.6	324.6	396.1	453.0	476.4
75°	219.6	275.9	344.2	398.6	412.5
77.5°	168.9	225.3	293.0	328.4	337.9
80°	124.0	177.2	231.6	250.6	251.2
82.5°	83.5	130.3	161.3	170.8	169.6
85°	46.2	79.7	88.0	85.4	82.9
87.5°	19.0	26.6	21.5	15.2	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)