

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: P474563

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474563
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-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

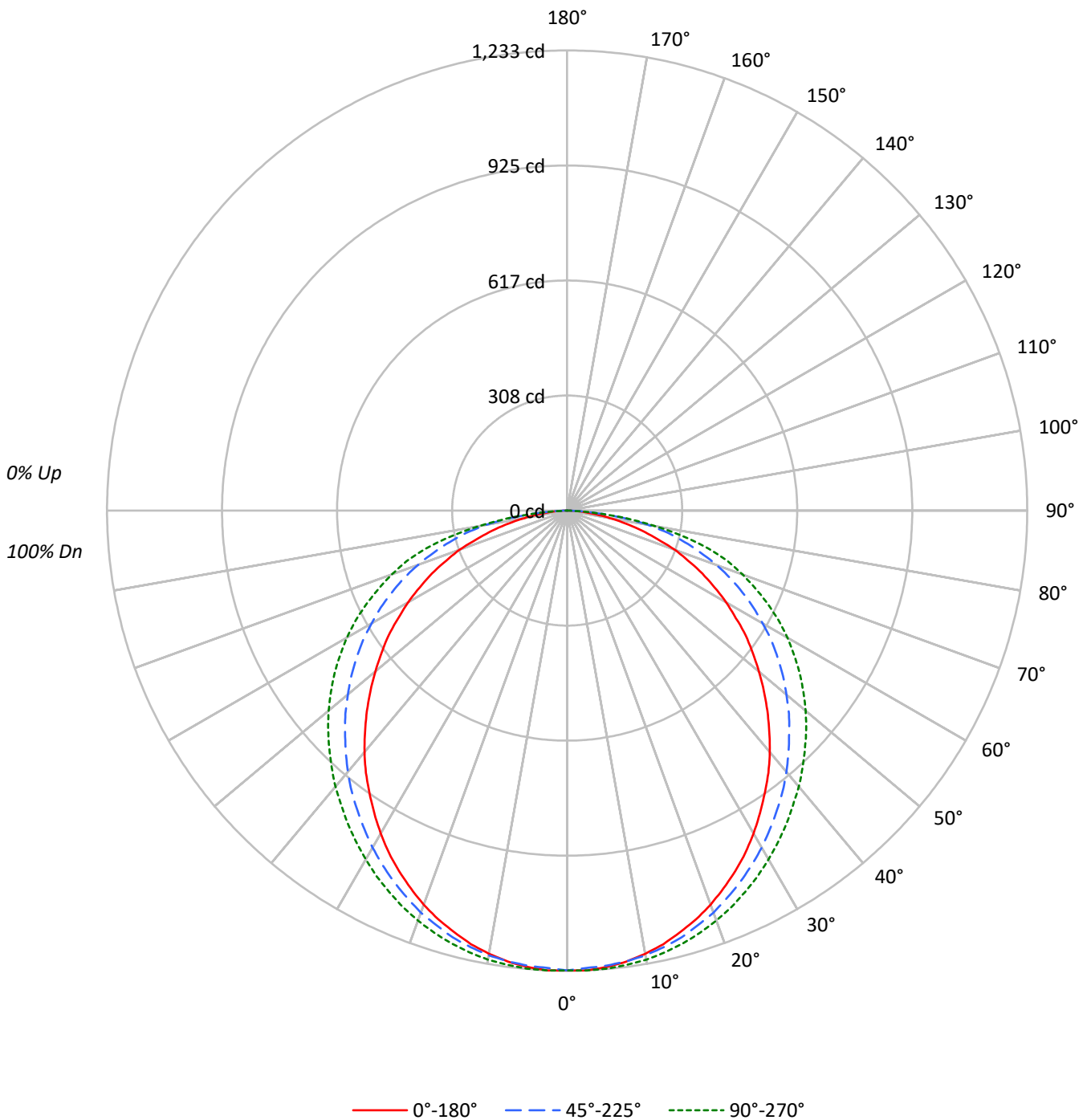
Lumens per Lamp: N/A
Luminaire Lumens: 3750.6 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3315	3315	3315
5°	3315	3305	3328
10°	3294	3306	3339
15°	3258	3299	3344
20°	3217	3283	3348
25°	3165	3259	3348
30°	3104	3240	3353
35°	3033	3220	3366
40°	2968	3210	3393
45°	2887	3202	3430
50°	2810	3211	3492
55°	2744	3233	3570
60°	2651	3257	3670
65°	2545	3296	3781
70°	2414	3342	3932
75°	2162	3389	4062
80°	1819	3398	3687
85°	1349	2572	2424



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	3.1
10°-20°	334.6	8.9
20°-30°	506.5	13.5
30°-40°	612.7	16.3
40°-50°	646.8	17.2
50°-60°	609.9	16.3
60°-70°	502.8	13.4
70°-80°	329.9	8.8
80°-90°	90.7	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°	957.8	25.5
0°-40°	1570.6	41.9
0°-60°	2827.2	75.4
0°-90°	3750.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3750.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1232	1232	1232	1232	1232	
5°	1227	1227	1224	1232	1232	116
15°	1170	1176	1184	1198	1200	330
25°	1066	1079	1098	1120	1128	491
35°	923	947	980	1014	1025	578
45°	759	793	841	886	901	585
55°	585	626	689	741	761	521
65°	400	448	518	573	594	395
75°	208	261	326	378	391	220
85°	44	76	83	81	78	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.0	1232.0	1232.0	1232.0	1232.0
2.5°	1233.2	1232.0	1226.6	1233.8	1233.2
5°	1227.2	1227.2	1223.6	1232.0	1232.0
7.5°	1218.8	1219.4	1218.2	1227.8	1227.8
10°	1205.6	1208.0	1209.8	1220.6	1221.8
12.5°	1190.0	1194.2	1197.8	1211.0	1212.2
15°	1169.6	1176.2	1184.0	1197.8	1200.2
17.5°	1148.7	1156.5	1164.9	1182.8	1185.8
20°	1123.5	1132.5	1146.3	1164.3	1169.0
22.5°	1095.3	1107.9	1122.3	1143.9	1149.9
25°	1066.0	1079.2	1097.7	1120.5	1127.7
27.5°	1034.2	1049.8	1070.8	1097.1	1104.9
30°	998.9	1016.9	1042.6	1070.8	1079.2
32.5°	961.7	982.7	1011.5	1042.6	1052.2
35°	923.4	947.3	980.3	1013.9	1024.6
37.5°	885.6	909.6	948.5	983.9	994.1
40°	844.9	871.2	913.8	951.5	965.9
42.5°	801.7	832.9	877.8	919.8	933.6
45°	758.6	792.7	841.3	886.2	901.2
47.5°	714.9	752.6	805.9	851.5	868.8
50°	671.1	711.3	767.0	816.1	834.1
52.5°	626.8	668.7	729.2	781.4	797.5
55°	584.8	626.2	689.1	740.6	761.0
57.5°	536.3	583.0	649.5	701.7	721.4
60°	492.5	538.1	605.2	660.3	681.9
62.5°	445.2	491.9	562.7	617.8	638.8
65°	399.7	447.6	517.7	572.8	593.8
67.5°	350.5	400.9	472.8	526.1	546.5
70°	306.8	354.1	424.8	479.4	499.7
72.5°	253.5	307.4	375.1	429.0	451.2
75°	207.9	261.3	326.0	377.5	390.7
77.5°	160.0	213.3	277.4	311.0	320.0
80°	117.4	167.8	219.3	237.3	237.9
82.5°	79.1	123.4	152.8	161.8	160.6
85°	43.7	75.5	83.3	80.9	78.5
87.5°	18.0	25.2	20.4	14.4	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)