

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: P475489

Luminaire Tested: **14CZ2-39-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475489
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-39-SQR-UNV-L830-CD1-U
Description: 1'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

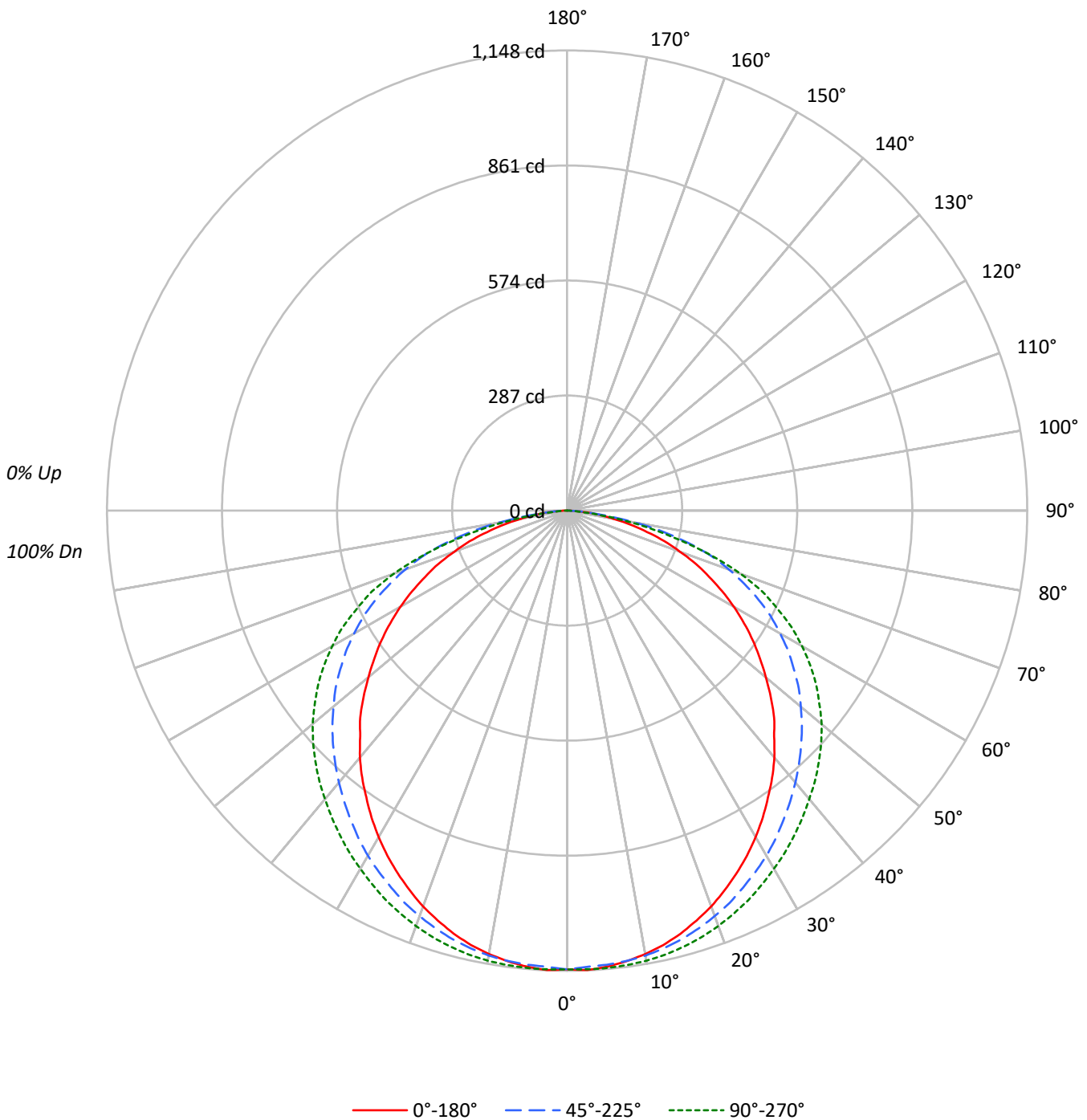
Lumens per Lamp: N/A
Luminaire Lumens: 3593.3 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.34 / 1.43
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
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	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	77	74	70	68
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	57
4	81	69	60	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	38	50	43	38	49	43	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3080	3080	3080
5°	3086	3072	3094
10°	3069	3080	3116
15°	3044	3084	3137
20°	3010	3083	3158
25°	2967	3082	3181
30°	2922	3090	3206
35°	2870	3093	3246
40°	2826	3111	3300
45°	2780	3143	3379
50°	2710	3185	3470
55°	2656	3241	3560
60°	2588	3303	3642
65°	2487	3359	3682
70°	2355	3385	3616
75°	2152	3270	3122
80°	1808	2673	2328
85°	1315	1346	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.7	3.0
10°-20°	313.2	8.7
20°-30°	478.9	13.3
30°-40°	587.8	16.4
40°-50°	632.1	17.6
50°-60°	606.8	16.9
60°-70°	502.7	14.0
70°-80°	301.3	8.4
80°-90°	61.7	1.7
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°	900.8	25.1
0°-40°	1488.6	41.4
0°-60°	2727.6	75.9
0°-90°	3593.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3593.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1144	1144	1144	1144	1144	
5°	1142	1140	1137	1146	1146	108
15°	1093	1098	1107	1124	1126	308
25°	999	1016	1038	1065	1071	460
35°	874	903	942	978	988	547
45°	730	769	826	872	888	562
55°	566	620	691	742	759	506
65°	391	454	528	569	578	387
75°	207	270	314	307	300	219
85°	43	62	44	29	28	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1144.5	1144.5	1144.5	1144.5	1144.5
2.5°	1147.5	1144.5	1139.4	1147.5	1145.5
5°	1142.4	1140.4	1137.3	1146.5	1145.5
7.5°	1134.3	1134.3	1133.3	1144.5	1143.4
10°	1123.1	1125.2	1127.2	1140.4	1140.4
12.5°	1110.0	1112.0	1118.1	1133.3	1134.3
15°	1092.7	1097.8	1106.9	1124.2	1126.2
17.5°	1072.4	1080.5	1092.7	1113.0	1116.0
20°	1051.1	1060.2	1076.5	1098.8	1102.9
22.5°	1025.7	1038.9	1059.2	1082.6	1087.6
25°	999.4	1015.6	1037.9	1065.3	1071.4
27.5°	971.0	990.2	1016.6	1045.0	1052.1
30°	940.5	962.8	994.3	1024.7	1031.8
32.5°	908.1	934.4	968.9	1002.4	1011.5
35°	873.6	903.0	941.5	978.1	988.2
37.5°	840.1	871.5	914.1	953.7	964.9
40°	804.6	838.0	885.7	927.3	939.5
42.5°	764.0	804.6	856.3	901.0	915.2
45°	730.5	769.1	825.9	871.5	887.8
47.5°	688.9	733.5	794.4	843.1	859.4
50°	647.3	698.0	760.9	811.7	828.9
52.5°	606.7	658.5	728.5	778.2	793.4
55°	566.1	619.9	690.9	741.7	758.9
57.5°	523.5	582.4	654.4	705.1	719.3
60°	480.9	539.8	613.8	662.5	676.7
62.5°	436.3	499.2	573.2	617.9	632.1
65°	390.6	454.5	527.6	569.2	578.3
67.5°	348.0	412.9	478.9	517.4	526.6
70°	299.3	368.3	430.2	458.6	459.6
72.5°	254.7	318.6	377.4	385.5	383.5
75°	207.0	269.9	314.5	307.4	300.3
77.5°	160.3	224.2	247.6	227.3	222.2
80°	116.7	174.5	172.5	153.2	150.2
82.5°	80.2	120.7	99.4	81.2	75.1
85°	42.6	61.9	43.6	29.4	28.4
87.5°	16.2	15.2	9.1	6.1	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)