

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: P473842

Luminaire Tested: **24CZ2-90VHE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473842
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9078.9 lumens
Efficiency: N/A
Efficacy: 141.6 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

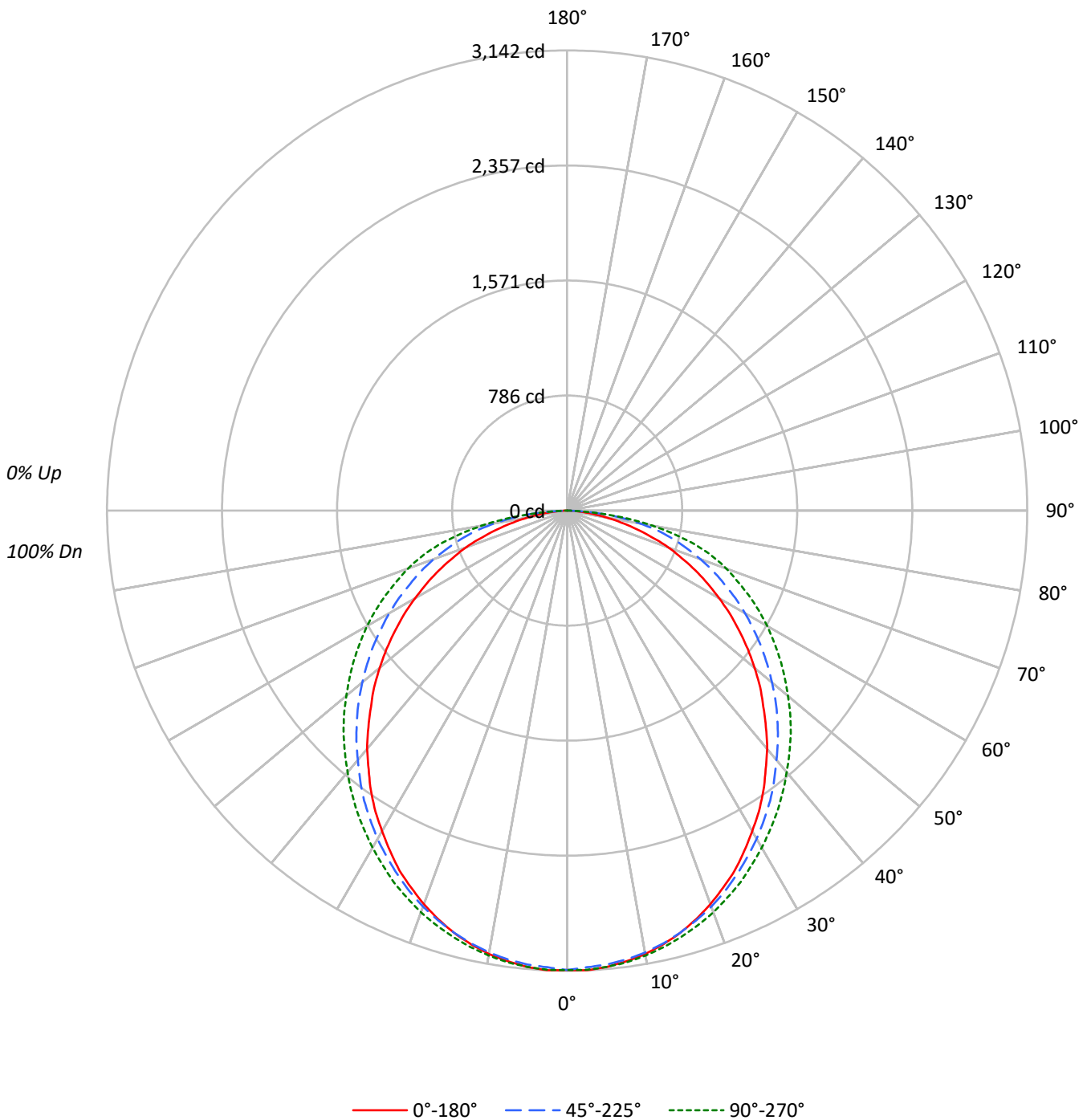
Input Watts (W): 64.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4221	4221	4221
5°	4223	4202	4223
10°	4200	4186	4214
15°	4158	4156	4196
20°	4095	4120	4179
25°	4024	4070	4159
30°	3926	4022	4129
35°	3838	3970	4112
40°	3733	3905	4096
45°	3606	3865	4108
50°	3497	3822	4120
55°	3368	3795	4167
60°	3229	3777	4243
65°	3077	3764	4352
70°	2897	3803	4552
75°	2547	3881	4735
80°	2125	3910	4568
85°	1518	3352	3396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.6	3.3
10°-20°	844.8	9.3
20°-30°	1267.3	14.0
30°-40°	1513.0	16.7
40°-50°	1567.2	17.3
50°-60°	1442.8	15.9
60°-70°	1163.8	12.8
70°-80°	760.4	8.4
80°-90°	222.9	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°	2408.6	26.5
0°-40°	3921.7	43.2
0°-60°	6931.6	76.3
0°-90°	9078.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9078.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3137	3137	3137	3137	3137	
5°	3127	3124	3111	3128	3127	297
15°	2985	2985	2983	3013	3013	841
25°	2710	2716	2741	2791	2801	1246
35°	2336	2357	2417	2483	2504	1460
45°	1895	1942	2031	2122	2159	1465
55°	1436	1498	1618	1737	1776	1285
65°	967	1033	1182	1317	1367	956
75°	490	582	747	876	911	523
85°	98	170	217	230	220	122
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3137.3	3137.3	3137.3	3137.3	3137.3
2.5°	3141.7	3137.3	3121.2	3140.2	3138.8
5°	3127.0	3124.1	3110.9	3128.5	3127.0
7.5°	3103.6	3102.1	3091.8	3110.9	3110.9
10°	3074.2	3071.3	3064.0	3086.0	3084.5
12.5°	3033.2	3031.7	3027.3	3053.7	3052.2
15°	2984.8	2984.8	2983.3	3012.6	3012.6
17.5°	2926.1	2927.6	2933.4	2967.2	2968.6
20°	2860.1	2866.0	2877.7	2915.8	2918.8
22.5°	2785.3	2797.0	2813.2	2855.7	2860.1
25°	2710.5	2716.4	2741.3	2791.2	2801.4
27.5°	2619.6	2634.2	2666.5	2717.8	2728.1
30°	2527.2	2547.7	2588.8	2641.6	2657.7
32.5°	2436.2	2453.8	2502.2	2562.4	2581.4
35°	2336.5	2357.0	2417.2	2483.2	2503.7
37.5°	2226.5	2258.7	2321.8	2398.1	2420.1
40°	2125.3	2154.6	2223.5	2308.6	2332.1
42.5°	2009.4	2046.1	2129.7	2216.2	2245.5
45°	1895.0	1941.9	2031.4	2122.3	2159.0
47.5°	1787.9	1826.1	1931.7	2034.3	2066.6
50°	1670.6	1714.6	1826.1	1934.6	1968.3
52.5°	1554.7	1607.5	1720.5	1834.9	1871.5
55°	1435.9	1497.5	1617.8	1736.6	1776.2
57.5°	1321.5	1383.1	1507.8	1633.9	1675.0
60°	1199.8	1265.8	1403.7	1525.4	1576.7
62.5°	1082.4	1148.4	1293.6	1425.7	1474.1
65°	966.6	1032.6	1182.2	1317.1	1367.0
67.5°	846.3	918.2	1078.0	1208.6	1257.0
70°	736.3	805.2	966.6	1105.9	1157.2
72.5°	610.2	692.3	856.6	994.4	1042.8
75°	489.9	582.3	746.6	875.6	910.8
77.5°	378.4	470.8	635.1	731.9	753.9
80°	274.3	368.1	504.6	572.0	589.6
82.5°	177.5	274.3	365.2	410.7	416.5
85°	98.3	170.1	217.1	230.3	220.0
87.5°	35.2	64.5	63.1	51.3	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)