

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: P473848

Luminaire Tested: **24CZ2-120VHE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473848
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-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: 11977.8 lumens
Efficiency: N/A
Efficacy: 142.3 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

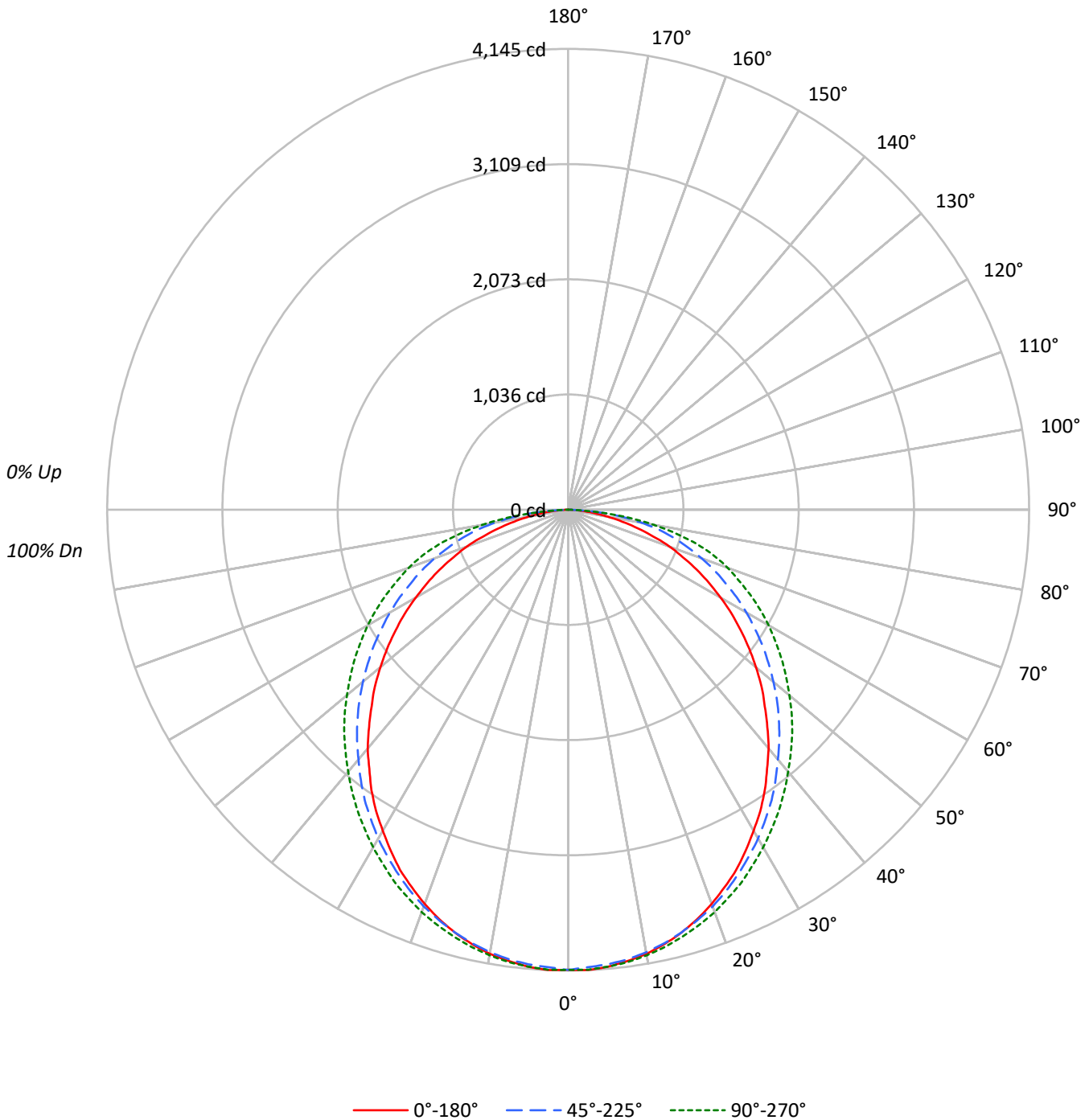
Input Watts (W): 84.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5569	5569	5569
5°	5572	5543	5572
10°	5541	5523	5560
15°	5485	5483	5536
20°	5403	5436	5514
25°	5309	5369	5487
30°	5180	5306	5448
35°	5063	5238	5425
40°	4925	5152	5404
45°	4757	5100	5420
50°	4613	5043	5436
55°	4444	5007	5497
60°	4260	4983	5598
65°	4060	4966	5742
70°	3821	5017	6006
75°	3360	5120	6247
80°	2804	5158	6027
85°	2001	4421	4482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.3	3.3
10°-20°	1114.5	9.3
20°-30°	1672.0	14.0
30°-40°	1996.1	16.7
40°-50°	2067.6	17.3
50°-60°	1903.5	15.9
60°-70°	1535.5	12.8
70°-80°	1003.2	8.4
80°-90°	294.1	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°	3177.7	26.5
0°-40°	5173.9	43.2
0°-60°	9145.0	76.3
0°-90°	11977.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11977.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4139	4139	4139	4139	4139	
5°	4126	4122	4104	4128	4126	392
15°	3938	3938	3936	3975	3975	1110
25°	3576	3584	3617	3682	3696	1644
35°	3082	3110	3189	3276	3303	1926
45°	2500	2562	2680	2800	2848	1933
55°	1894	1976	2134	2291	2343	1695
65°	1275	1362	1560	1738	1804	1261
75°	646	768	985	1155	1202	690
85°	130	224	286	304	290	161
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4139.1	4139.1	4139.1	4139.1	4139.1
2.5°	4144.9	4139.1	4117.8	4143.0	4141.0
5°	4125.5	4121.7	4104.3	4127.5	4125.5
7.5°	4094.6	4092.6	4079.1	4104.3	4104.3
10°	4055.9	4052.0	4042.3	4071.4	4069.4
12.5°	4001.7	3999.8	3994.0	4028.8	4026.9
15°	3937.8	3937.8	3935.9	3974.6	3974.6
17.5°	3860.4	3862.4	3870.1	3914.6	3916.6
20°	3773.4	3781.1	3796.6	3846.9	3850.8
22.5°	3674.7	3690.2	3711.4	3767.6	3773.4
25°	3576.0	3583.7	3616.6	3682.4	3696.0
27.5°	3456.0	3475.4	3517.9	3585.7	3599.2
30°	3334.1	3361.2	3415.4	3485.0	3506.3
32.5°	3214.1	3237.3	3301.2	3380.5	3405.7
35°	3082.5	3109.6	3189.0	3276.1	3303.1
37.5°	2937.4	2980.0	3063.2	3163.8	3192.8
40°	2803.9	2842.6	2933.5	3045.8	3076.7
42.5°	2651.0	2699.4	2809.7	2923.9	2962.6
45°	2500.1	2562.0	2680.1	2800.0	2848.4
47.5°	2358.8	2409.1	2548.5	2683.9	2726.5
50°	2204.0	2262.1	2409.1	2552.3	2596.8
52.5°	2051.2	2120.8	2269.8	2420.8	2469.1
55°	1894.4	1975.7	2134.4	2291.1	2343.4
57.5°	1743.5	1824.8	1989.2	2155.7	2209.8
60°	1582.9	1670.0	1851.8	2012.5	2080.2
62.5°	1428.1	1515.1	1706.7	1880.9	1944.7
65°	1275.2	1362.3	1559.7	1737.7	1803.5
67.5°	1116.5	1211.3	1422.3	1594.5	1658.3
70°	971.4	1062.3	1275.2	1459.0	1526.8
72.5°	805.0	913.3	1130.1	1312.0	1375.8
75°	646.3	768.2	984.9	1155.2	1201.7
77.5°	499.2	621.2	837.9	965.6	994.6
80°	361.9	485.7	665.7	754.7	777.9
82.5°	234.1	361.9	481.8	541.8	549.6
85°	129.6	224.5	286.4	303.8	290.3
87.5°	46.4	85.1	83.2	67.7	54.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)