

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: P473998

Luminaire Tested: **24CZ2-120VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473998
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11790.1 lumens
Efficiency: N/A
Efficacy: 140.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

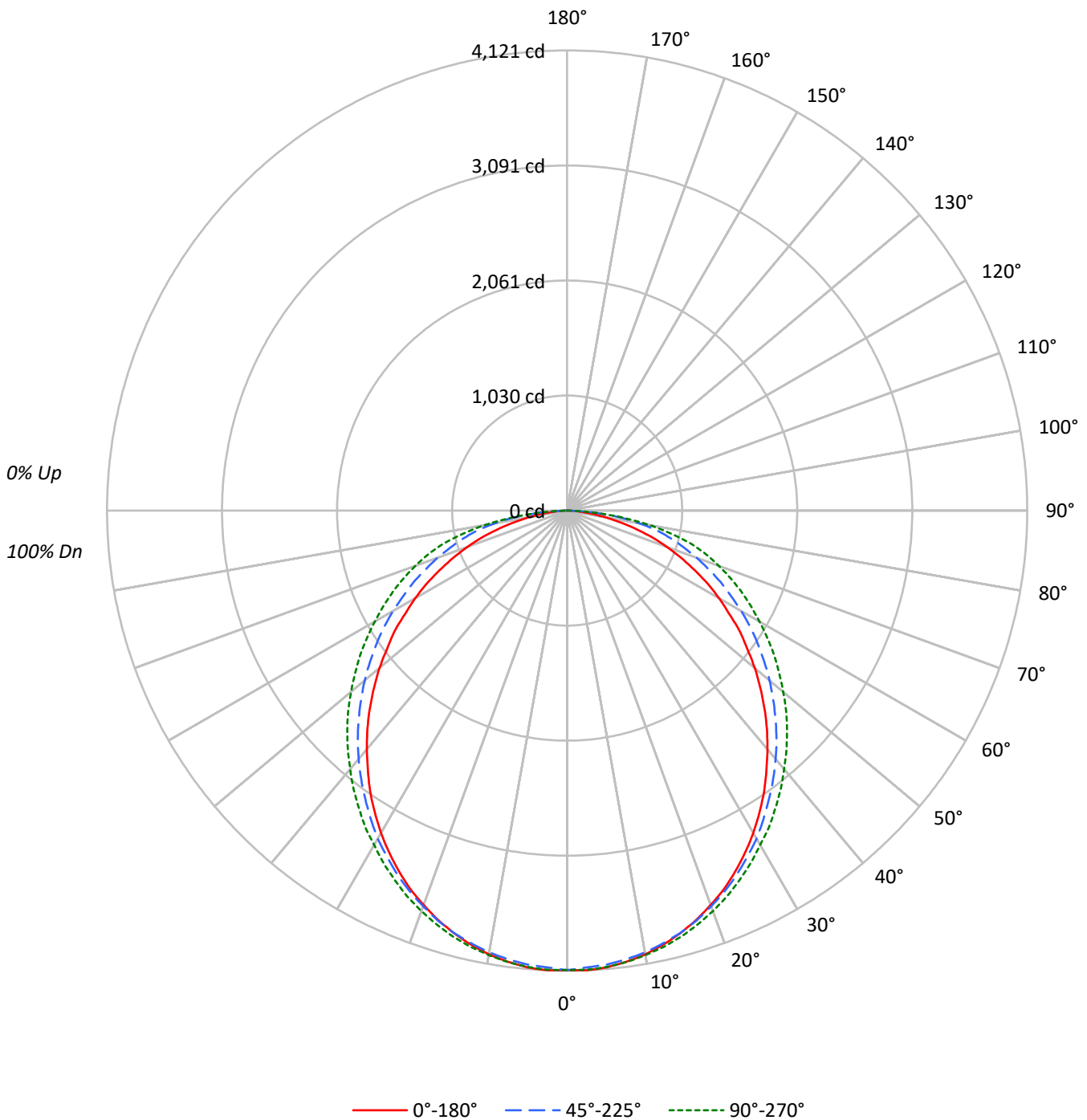
Input Watts (W): 84.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	83	77	95	88	81	76	84	79	74		81	76	72		78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62		71	65	61		68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26		37	30	25		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5537	5537	5537
5°	5545	5511	5540
10°	5514	5490	5522
15°	5457	5455	5500
20°	5382	5399	5465
25°	5293	5339	5422
30°	5181	5271	5371
35°	5051	5179	5341
40°	4901	5102	5310
45°	4754	5023	5299
50°	4593	4954	5286
55°	4429	4893	5315
60°	4226	4846	5352
65°	4001	4827	5481
70°	3733	4853	5676
75°	3322	4993	5980
80°	2716	5102	5837
85°	1913	4455	4545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.1	3.3
10°-20°	1108.1	9.4
20°-30°	1661.0	14.1
30°-40°	1978.3	16.8
40°-50°	2039.8	17.3
50°-60°	1861.3	15.8
60°-70°	1488.4	12.6
70°-80°	972.2	8.2
80°-90°	291.9	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°	3158.1	26.8
0°-40°	5136.4	43.6
0°-60°	9037.6	76.7
0°-90°	11790.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11790.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4115	4115	4115	4115	4115	
5°	4106	4098	4080	4106	4102	390
15°	3918	3920	3916	3949	3949	1104
25°	3565	3571	3596	3648	3652	1641
35°	3075	3097	3153	3232	3252	1921
45°	2498	2543	2640	2750	2785	1927
55°	1888	1942	2086	2223	2266	1682
65°	1257	1342	1516	1666	1722	1246
75°	639	746	960	1116	1150	679
85°	124	223	289	294	294	157
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4115.2	4115.2	4115.2	4115.2	4115.2
2.5°	4121.1	4115.2	4093.9	4119.1	4115.2
5°	4105.6	4097.8	4080.4	4105.6	4101.7
7.5°	4074.6	4070.7	4053.3	4082.3	4078.5
10°	4035.8	4032.0	4018.4	4047.5	4041.7
12.5°	3981.6	3979.7	3970.0	4004.9	4001.0
15°	3917.7	3919.7	3915.8	3948.7	3948.7
17.5°	3844.1	3842.2	3849.9	3890.6	3886.7
20°	3758.9	3760.9	3770.5	3817.0	3817.0
22.5°	3669.8	3667.9	3689.2	3735.7	3739.6
25°	3565.3	3571.1	3596.2	3648.5	3652.4
27.5°	3452.9	3462.6	3493.6	3553.6	3559.4
30°	3334.8	3346.4	3392.9	3449.1	3456.8
32.5°	3205.1	3230.2	3272.8	3344.5	3363.9
35°	3075.3	3096.6	3152.8	3232.2	3251.5
37.5°	2932.0	2966.9	3030.8	3117.9	3143.1
40°	2790.6	2825.5	2904.9	2995.9	3023.0
42.5°	2647.3	2684.1	2775.1	2877.8	2906.8
45°	2498.2	2542.7	2639.6	2750.0	2784.8
47.5°	2345.2	2397.5	2502.1	2622.1	2660.9
50°	2194.2	2246.4	2366.5	2490.5	2525.3
52.5°	2031.5	2097.3	2225.1	2358.8	2393.6
55°	1888.2	1942.4	2085.7	2223.2	2265.8
57.5°	1719.7	1793.3	1946.3	2085.7	2126.4
60°	1570.6	1638.4	1801.0	1942.4	1988.9
62.5°	1419.5	1489.2	1651.9	1812.6	1855.3
65°	1256.8	1342.1	1516.3	1665.5	1721.6
67.5°	1101.9	1191.0	1369.2	1528.0	1586.1
70°	948.9	1039.9	1233.6	1396.3	1442.8
72.5°	797.9	892.8	1094.2	1253.0	1307.2
75°	639.1	745.6	960.5	1115.5	1150.3
77.5°	490.0	608.1	825.0	929.6	954.7
80°	350.5	480.3	658.4	734.0	753.3
82.5°	230.5	356.3	491.9	532.6	526.8
85°	123.9	222.7	288.6	294.4	294.4
87.5°	48.4	89.1	91.0	69.7	65.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)