

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: P473898

Luminaire Tested: **24CZ2-120VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473898
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12205.4 lumens
Efficiency: N/A
Efficacy: 145.0 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

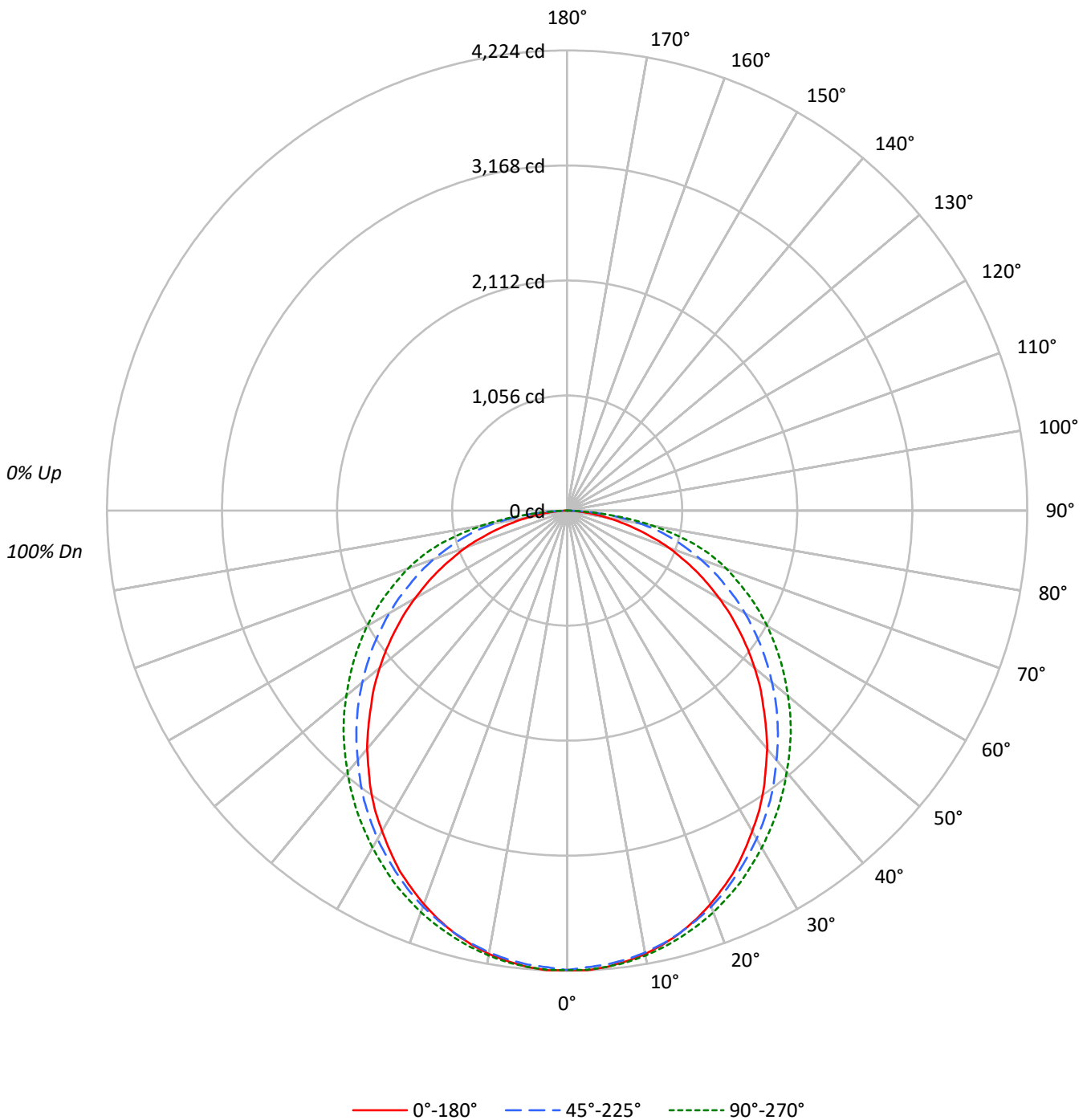
Input Watts (W): 84.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5675	5675	5675
5°	5678	5649	5678
10°	5647	5628	5665
15°	5590	5587	5642
20°	5506	5539	5618
25°	5410	5471	5591
30°	5278	5407	5551
35°	5159	5338	5529
40°	5018	5250	5507
45°	4848	5197	5523
50°	4701	5139	5539
55°	4528	5102	5602
60°	4341	5078	5704
65°	4137	5060	5851
70°	3894	5112	6120
75°	3424	5218	6366
80°	2857	5256	6142
85°	2039	4505	4566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.7	3.3
10°-20°	1135.7	9.3
20°-30°	1703.7	14.0
30°-40°	2034.1	16.7
40°-50°	2106.9	17.3
50°-60°	1939.6	15.9
60°-70°	1564.6	12.8
70°-80°	1022.3	8.4
80°-90°	299.7	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°	3238.1	26.5
0°-40°	5272.2	43.2
0°-60°	9318.7	76.3
0°-90°	12205.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12205.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4218	4218	4218	4218	4218	
5°	4204	4200	4182	4206	4204	399
15°	4013	4013	4011	4050	4050	1131
25°	3644	3652	3685	3752	3766	1675
35°	3141	3169	3250	3338	3366	1962
45°	2548	2611	2731	2853	2902	1969
55°	1930	2013	2175	2335	2388	1728
65°	1299	1388	1589	1771	1838	1285
75°	659	783	1004	1177	1224	703
85°	132	229	292	310	296	164
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4217.7	4217.7	4217.7	4217.7	4217.7
2.5°	4223.6	4217.7	4196.0	4221.7	4219.7
5°	4203.9	4200.0	4182.2	4205.9	4203.9
7.5°	4172.4	4170.4	4156.6	4182.2	4182.2
10°	4132.9	4129.0	4119.1	4148.7	4146.7
12.5°	4077.7	4075.8	4069.8	4105.3	4103.4
15°	4012.7	4012.7	4010.7	4050.1	4050.1
17.5°	3933.8	3935.8	3943.6	3989.0	3991.0
20°	3845.1	3852.9	3868.7	3920.0	3923.9
22.5°	3744.5	3760.3	3782.0	3839.1	3845.1
25°	3643.9	3651.8	3685.3	3752.4	3766.2
27.5°	3521.7	3541.4	3584.8	3653.8	3667.6
30°	3397.5	3425.1	3480.3	3551.3	3572.9
32.5°	3275.2	3298.9	3363.9	3444.8	3470.4
35°	3141.1	3168.7	3249.6	3338.3	3365.9
37.5°	2993.2	3036.6	3121.4	3223.9	3253.5
40°	2857.2	2896.6	2989.3	3103.6	3135.2
42.5°	2701.4	2750.7	2863.1	2979.4	3018.9
45°	2547.6	2610.7	2731.0	2853.2	2902.5
47.5°	2403.7	2454.9	2596.9	2734.9	2778.3
50°	2245.9	2305.1	2454.9	2600.8	2646.2
52.5°	2090.1	2161.1	2312.9	2466.8	2516.0
55°	1930.4	2013.2	2174.9	2334.6	2387.9
57.5°	1776.6	1859.4	2027.0	2196.6	2251.8
60°	1613.0	1701.7	1887.0	2050.7	2119.7
62.5°	1455.2	1543.9	1739.1	1916.6	1981.7
65°	1299.4	1388.2	1589.3	1770.7	1837.7
67.5°	1137.7	1234.4	1449.3	1624.8	1689.9
70°	989.9	1082.5	1299.4	1486.8	1555.8
72.5°	820.3	930.7	1151.5	1336.9	1402.0
75°	658.6	782.8	1003.7	1177.2	1224.5
77.5°	508.7	633.0	853.8	983.9	1013.5
80°	368.7	494.9	678.3	769.0	792.7
82.5°	238.6	368.7	491.0	552.1	560.0
85°	132.1	228.7	291.8	309.6	295.8
87.5°	47.3	86.8	84.8	69.0	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)