

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: P474446

Luminaire Tested: **24CZ2-110VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474446
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8942.9 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

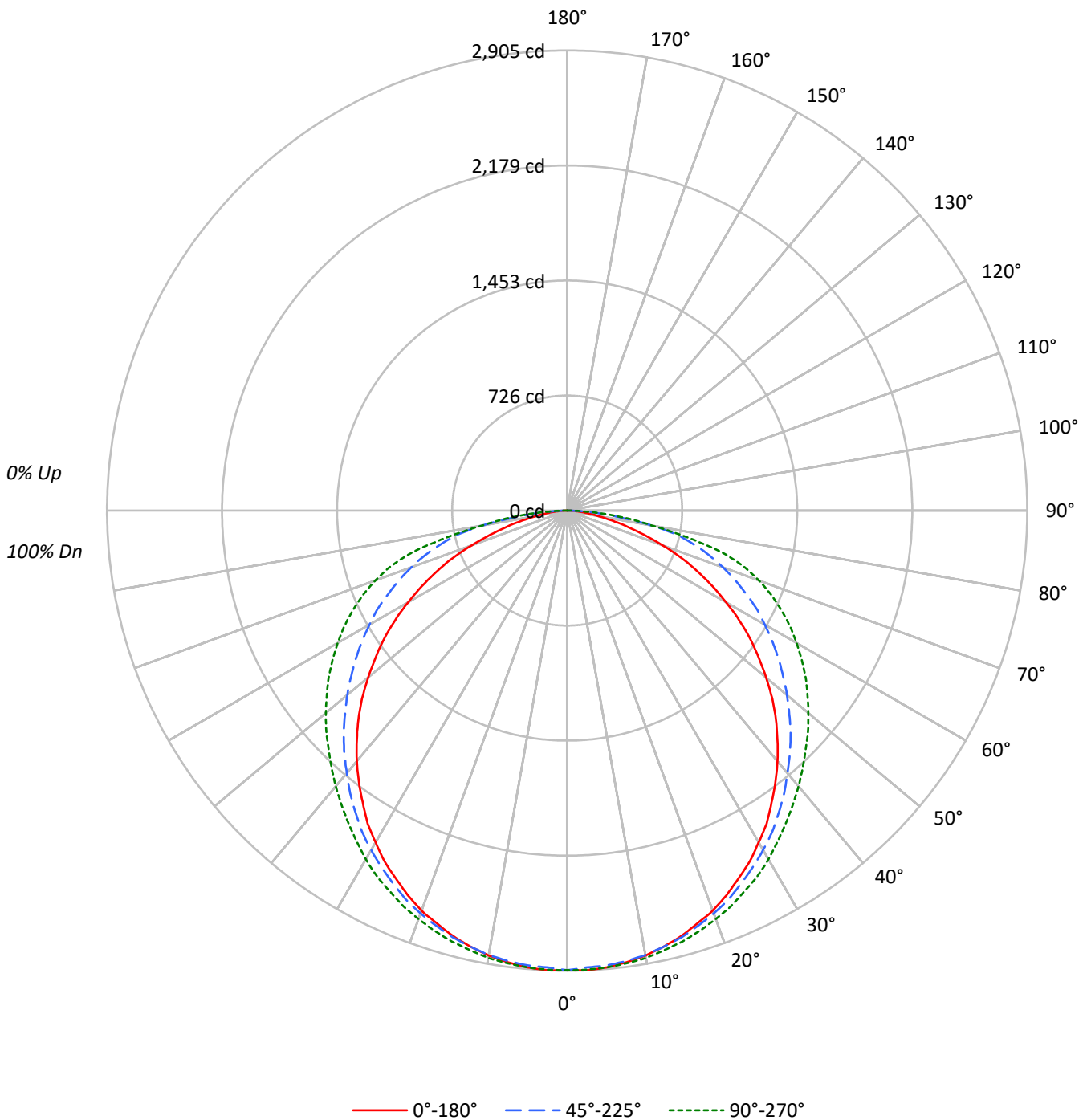
Input Watts (W): 77
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	42	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	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3904	3904	3904
5°	3909	3893	3909
10°	3897	3893	3918
15°	3875	3885	3922
20°	3849	3876	3929
25°	3802	3857	3935
30°	3757	3845	3950
35°	3696	3825	3954
40°	3630	3801	3991
45°	3548	3797	4054
50°	3433	3793	4162
55°	3311	3820	4312
60°	3123	3879	4503
65°	2885	3970	4756
70°	2519	4109	5067
75°	2044	4321	5235
80°	1509	4237	4237
85°	1156	3120	3523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.9	3.1
10°-20°	789.3	8.8
20°-30°	1201.6	13.4
30°-40°	1459.0	16.3
40°-50°	1541.5	17.2
50°-60°	1454.6	16.3
60°-70°	1209.4	13.5
70°-80°	795.7	8.9
80°-90°	216.9	2.4
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°	2265.8	25.3
0°-40°	3724.8	41.7
0°-60°	6720.9	75.2
0°-90°	8942.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8942.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2902	2902	2902	2902	2902	
5°	2894	2894	2883	2894	2894	275
15°	2782	2786	2789	2815	2815	785
25°	2561	2576	2598	2643	2651	1181
35°	2250	2276	2329	2388	2407	1409
45°	1864	1902	1995	2093	2130	1436
55°	1411	1471	1628	1782	1838	1257
65°	906	1011	1247	1430	1494	896
75°	393	573	831	984	1007	424
85°	75	165	202	225	228	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2901.5	2901.5	2901.5	2901.5	2901.5
2.5°	2905.3	2901.5	2886.5	2901.5	2901.5
5°	2894.2	2894.2	2882.7	2894.2	2894.2
7.5°	2875.4	2875.4	2867.7	2882.7	2882.7
10°	2852.7	2852.7	2849.2	2867.7	2867.7
12.5°	2819.3	2822.7	2819.3	2841.6	2841.6
15°	2781.6	2785.5	2789.3	2815.4	2815.4
17.5°	2733.2	2740.5	2748.2	2777.8	2781.6
20°	2688.2	2691.7	2706.7	2740.5	2744.3
22.5°	2628.3	2639.4	2658.3	2691.7	2703.2
25°	2560.7	2575.7	2598.3	2643.3	2650.6
27.5°	2497.3	2508.4	2538.4	2587.2	2602.2
30°	2418.5	2437.3	2474.6	2523.4	2542.2
32.5°	2343.6	2362.4	2407.4	2459.6	2474.6
35°	2250.2	2276.3	2328.6	2388.5	2407.4
37.5°	2160.3	2186.4	2250.2	2317.4	2340.1
40°	2066.5	2096.5	2164.1	2242.5	2272.5
42.5°	1965.5	2006.6	2081.5	2167.6	2201.4
45°	1864.4	1902.1	1995.4	2092.6	2130.3
47.5°	1756.0	1801.0	1902.1	2018.1	2063.1
50°	1640.0	1696.1	1812.1	1939.3	1988.1
52.5°	1524.0	1587.4	1718.4	1860.6	1913.2
55°	1411.4	1471.3	1628.5	1782.2	1838.3
57.5°	1288.0	1362.9	1535.1	1699.6	1756.0
60°	1160.4	1243.1	1441.3	1613.5	1673.4
62.5°	1033.3	1127.0	1351.4	1524.0	1587.4
65°	906.1	1011.0	1246.9	1430.2	1494.0
67.5°	782.3	898.4	1149.3	1333.0	1396.4
70°	640.2	786.2	1044.4	1224.2	1288.0
72.5°	509.1	677.8	943.3	1112.0	1168.1
75°	393.1	572.9	831.1	984.5	1007.1
77.5°	288.2	468.0	715.1	767.4	771.2
80°	194.8	374.3	546.8	539.1	546.8
82.5°	127.2	280.9	344.3	385.8	389.2
85°	74.9	164.8	202.1	224.8	228.2
87.5°	37.3	56.1	71.1	74.9	82.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)