

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: P474405

Luminaire Tested: **24CZ2-155VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474405
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-155VHE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12152.5 lumens
Efficiency: N/A
Efficacy: 106.6 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

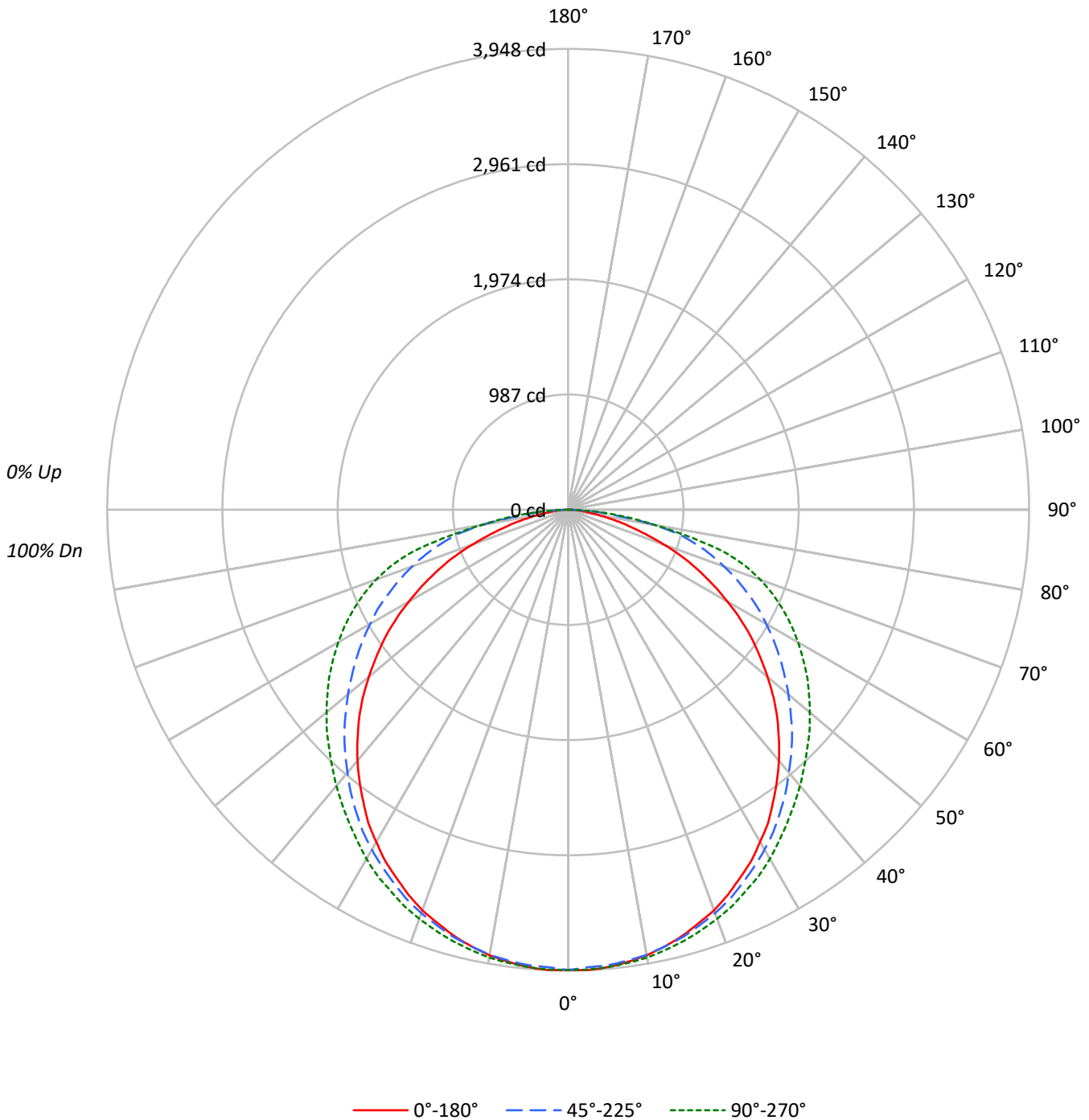
Input Watts (W): 114
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5305	5305	5305
5°	5312	5291	5312
10°	5296	5290	5324
15°	5265	5280	5329
20°	5231	5266	5340
25°	5166	5242	5347
30°	5106	5224	5367
35°	5023	5197	5373
40°	4932	5165	5424
45°	4821	5160	5508
50°	4665	5155	5655
55°	4499	5191	5860
60°	4243	5271	6119
65°	3920	5394	6464
70°	3422	5583	6886
75°	2777	5871	7115
80°	2051	5757	5757
85°	1572	4241	4789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.5	3.1
10°-20°	1072.6	8.8
20°-30°	1632.9	13.4
30°-40°	1982.7	16.3
40°-50°	2094.7	17.2
50°-60°	1976.6	16.3
60°-70°	1643.5	13.5
70°-80°	1081.2	8.9
80°-90°	294.7	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°	3079.0	25.3
0°-40°	5061.7	41.7
0°-60°	9133.0	75.2
0°-90°	12152.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12152.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3943	3943	3943	3943	3943	
5°	3933	3933	3917	3933	3933	374
15°	3780	3785	3790	3826	3826	1066
25°	3480	3500	3531	3592	3602	1605
35°	3058	3093	3164	3246	3271	1914
45°	2534	2585	2712	2844	2895	1951
55°	1918	1999	2213	2422	2498	1708
65°	1231	1374	1694	1944	2030	1217
75°	534	778	1129	1338	1369	576
85°	102	224	275	306	310	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3942.9	3942.9	3942.9	3942.9	3942.9
2.5°	3948.1	3942.9	3922.5	3942.9	3942.9
5°	3932.9	3932.9	3917.3	3932.9	3932.9
7.5°	3907.4	3907.4	3896.9	3917.3	3917.3
10°	3876.5	3876.5	3871.8	3896.9	3896.9
12.5°	3831.1	3835.8	3831.1	3861.4	3861.4
15°	3779.9	3785.2	3790.4	3825.9	3825.9
17.5°	3714.2	3724.1	3734.5	3774.7	3779.9
20°	3653.1	3657.8	3678.1	3724.1	3729.3
22.5°	3571.6	3586.7	3612.3	3657.8	3673.4
25°	3479.7	3500.1	3530.9	3592.0	3601.9
27.5°	3393.5	3408.7	3449.4	3515.7	3536.1
30°	3286.5	3312.1	3362.7	3429.0	3454.6
32.5°	3184.7	3210.3	3271.4	3342.4	3362.7
35°	3057.8	3093.3	3164.3	3245.8	3271.4
37.5°	2935.6	2971.1	3057.8	3149.2	3180.0
40°	2808.2	2848.9	2940.8	3047.3	3088.1
42.5°	2670.9	2726.7	2828.6	2945.5	2991.5
45°	2533.5	2584.7	2711.6	2843.7	2894.9
47.5°	2386.3	2447.4	2584.7	2742.4	2803.5
50°	2228.6	2304.8	2462.5	2635.4	2701.7
52.5°	2070.9	2157.1	2335.1	2528.3	2599.9
55°	1917.9	1999.4	2212.9	2421.8	2498.0
57.5°	1750.3	1852.1	2086.0	2309.5	2386.3
60°	1576.9	1689.2	1958.6	2192.6	2274.0
62.5°	1404.1	1531.5	1836.4	2070.9	2157.1
65°	1231.3	1373.8	1694.4	1943.5	2030.2
67.5°	1063.1	1220.8	1561.8	1811.4	1897.5
70°	869.9	1068.3	1419.2	1663.6	1750.3
72.5°	691.9	921.1	1281.9	1511.1	1587.4
75°	534.2	778.5	1129.4	1337.8	1368.6
77.5°	391.6	636.0	971.7	1042.8	1048.0
80°	264.7	508.6	743.0	732.6	743.0
82.5°	172.8	381.7	467.9	524.3	529.0
85°	101.8	224.0	274.7	305.5	310.2
87.5°	50.6	76.2	96.6	101.8	111.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)