

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: P474042

Luminaire Tested: **24CZ2-90VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474042
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9260.6 lumens
Efficiency: N/A
Efficacy: 144.5 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

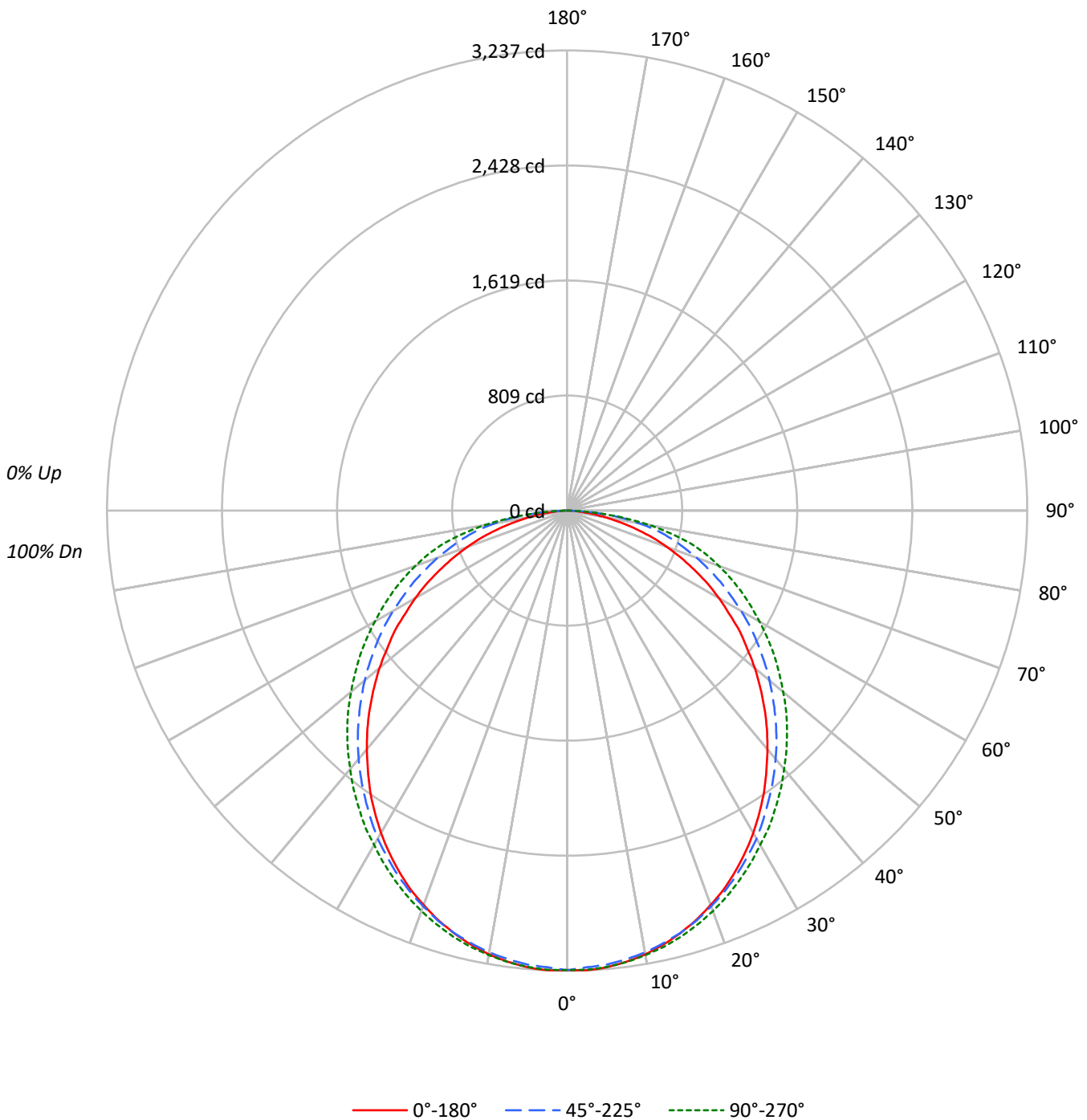
Input Watts (W): 64.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4349	4349	4349
5°	4356	4329	4351
10°	4331	4312	4337
15°	4286	4284	4320
20°	4228	4241	4293
25°	4157	4194	4259
30°	4070	4140	4218
35°	3968	4068	4195
40°	3850	4008	4171
45°	3734	3945	4162
50°	3607	3891	4152
55°	3479	3843	4175
60°	3320	3807	4204
65°	3143	3792	4305
70°	2932	3812	4458
75°	2610	3922	4697
80°	2133	4007	4585
85°	1504	3498	3569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.6	3.3
10°-20°	870.4	9.4
20°-30°	1304.7	14.1
30°-40°	1553.9	16.8
40°-50°	1602.2	17.3
50°-60°	1462.0	15.8
60°-70°	1169.1	12.6
70°-80°	763.6	8.2
80°-90°	229.3	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°	2480.6	26.8
0°-40°	4034.5	43.6
0°-60°	7098.7	76.7
0°-90°	9260.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9260.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3232	3232	3232	3232	3232	
5°	3225	3219	3205	3225	3222	306
15°	3077	3079	3076	3102	3102	867
25°	2800	2805	2825	2866	2869	1289
35°	2416	2432	2476	2539	2554	1509
45°	1962	1997	2073	2160	2187	1513
55°	1483	1526	1638	1746	1780	1321
65°	987	1054	1191	1308	1352	979
75°	502	586	754	876	904	533
85°	97	175	227	231	231	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3232.4	3232.4	3232.4	3232.4	3232.4
2.5°	3236.9	3232.4	3215.6	3235.4	3232.4
5°	3224.8	3218.7	3205.0	3224.8	3221.7
7.5°	3200.4	3197.4	3183.7	3206.5	3203.5
10°	3170.0	3167.0	3156.3	3179.1	3174.6
12.5°	3127.4	3125.9	3118.3	3145.7	3142.6
15°	3077.2	3078.7	3075.7	3101.6	3101.6
17.5°	3019.4	3017.9	3024.0	3055.9	3052.9
20°	2952.5	2954.0	2961.6	2998.1	2998.1
22.5°	2882.5	2881.0	2897.7	2934.2	2937.3
25°	2800.4	2804.9	2824.7	2865.8	2868.8
27.5°	2712.2	2719.8	2744.1	2791.3	2795.8
30°	2619.4	2628.5	2665.0	2709.1	2715.2
32.5°	2517.5	2537.2	2570.7	2627.0	2642.2
35°	2415.5	2432.3	2476.4	2538.7	2554.0
37.5°	2303.0	2330.4	2380.6	2449.0	2468.8
40°	2191.9	2219.3	2281.7	2353.2	2374.5
42.5°	2079.4	2108.3	2179.8	2260.4	2283.2
45°	1962.2	1997.2	2073.3	2160.0	2187.4
47.5°	1842.1	1883.1	1965.3	2059.6	2090.0
50°	1723.4	1764.5	1858.8	1956.2	1983.5
52.5°	1595.7	1647.4	1747.8	1852.7	1880.1
55°	1483.1	1525.7	1638.2	1746.2	1779.7
57.5°	1350.8	1408.6	1528.7	1638.2	1670.2
60°	1233.6	1286.9	1414.6	1525.7	1562.2
62.5°	1115.0	1169.7	1297.5	1423.8	1457.2
65°	987.2	1054.1	1191.0	1308.2	1352.3
67.5°	865.5	935.5	1075.4	1200.2	1245.8
70°	745.3	816.8	969.0	1096.7	1133.2
72.5°	626.7	701.2	859.4	984.2	1026.8
75°	502.0	585.6	754.5	876.2	903.5
77.5°	384.8	477.6	648.0	730.1	749.9
80°	275.3	377.2	517.2	576.5	591.7
82.5°	181.0	279.9	386.4	418.3	413.7
85°	97.4	174.9	226.6	231.2	231.2
87.5°	38.0	70.0	71.5	54.8	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)