

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: P475530

Luminaire Tested: **24GR-LD5-90-F1-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475530  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-90-F1-UNV-L830-CD1-U  
Description: GR 2'X4' LED TROFFER w/ F1 LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8694.3 lumens  
Efficiency: N/A  
Efficacy: 142.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.24 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

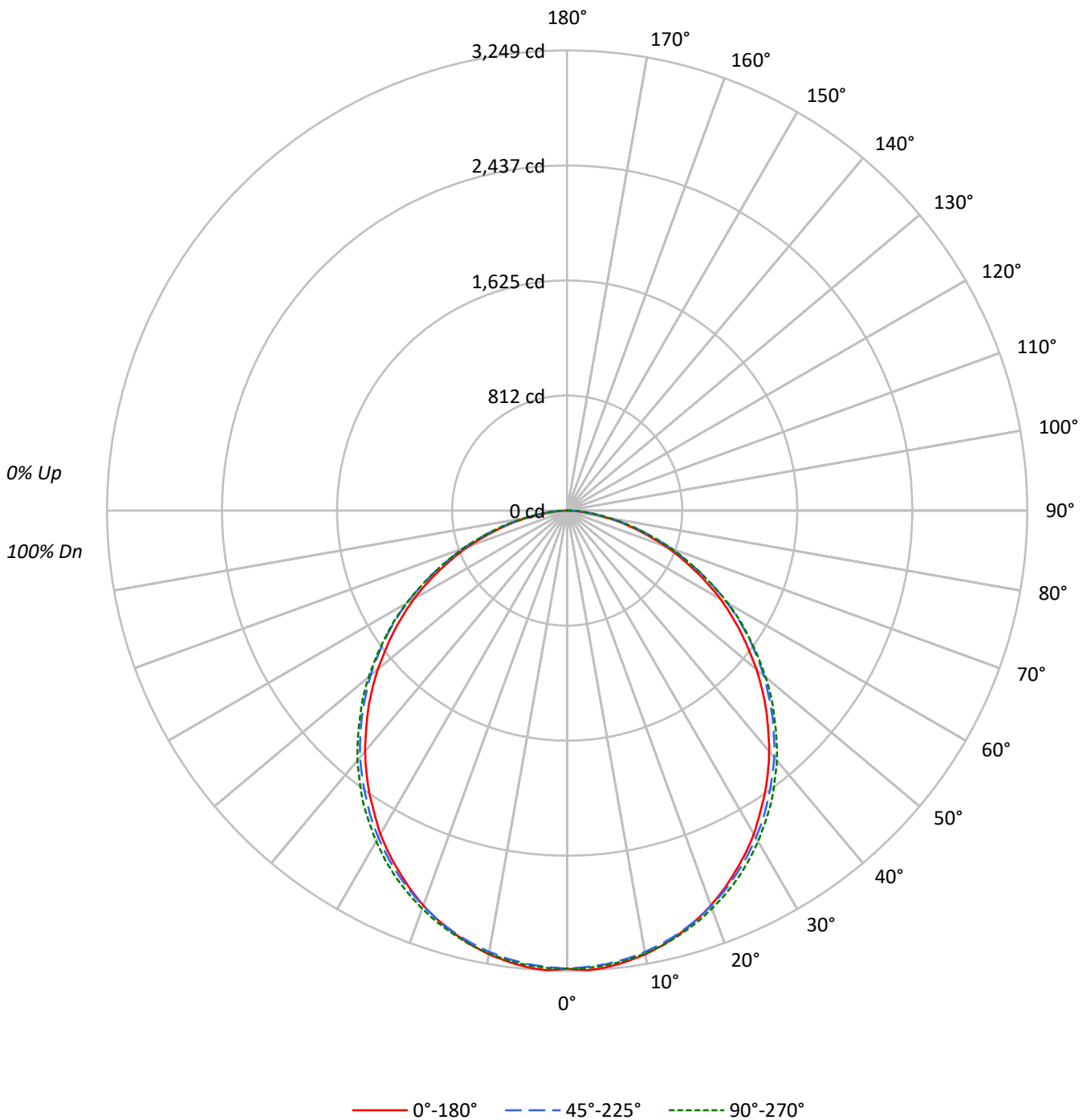
Input Watts (W): 61.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P475530

CATALOG NUMBER: 24GR-LD5-90-F1-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P475530

CATALOG NUMBER: 24GR-LD5-90-F1-UNV-L830-CD1-U

**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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4353	4353	4353
5°	4372	4341	4352
10°	4346	4323	4338
15°	4303	4295	4314
20°	4249	4254	4283
25°	4173	4201	4244
30°	4097	4142	4189
35°	4000	4067	4129
40°	3898	3996	4047
45°	3782	3897	3938
50°	3653	3795	3828
55°	3510	3666	3686
60°	3366	3515	3529
65°	3154	3304	3295
70°	2922	3056	3086
75°	2589	2739	2757
80°	2154	2312	2366
85°	1632	1791	2015



TEST NUMBER: P475530

CATALOG NUMBER: 24GR-LD5-90-F1-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.7	3.5
10°-20°	870.5	10.0
20°-30°	1304.3	15.0
30°-40°	1547.4	17.8
40°-50°	1571.5	18.1
50°-60°	1384.0	15.9
60°-70°	1017.0	11.7
70°-80°	553.1	6.4
80°-90°	140.9	1.6
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°	2480.5	28.5
0°-40°	4027.9	46.3
0°-60°	6983.4	80.3
0°-90°	8694.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8694.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3235	3235	3235	3235	3235	
5°	3237	3223	3214	3214	3222	307
15°	3089	3083	3083	3088	3097	871
25°	2811	2815	2830	2846	2859	1295
35°	2435	2449	2476	2501	2514	1522
45°	1988	2004	2048	2072	2069	1532
55°	1496	1518	1563	1577	1572	1338
65°	991	1007	1038	1045	1035	982
75°	498	508	527	529	530	530
85°	106	108	116	126	130	128
90°	0	0	0	0	0	



TEST NUMBER: P475530

CATALOG NUMBER: 24GR-LD5-90-F1-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3235.0	3235.0	3235.0	3235.0	3235.0
2.5°	3248.7	3235.9	3224.8	3224.8	3232.5
5°	3236.7	3223.1	3213.7	3213.7	3222.2
7.5°	3212.0	3200.9	3193.2	3193.2	3202.6
10°	3181.3	3170.2	3164.2	3165.1	3175.3
12.5°	3140.4	3130.1	3127.6	3129.3	3142.1
15°	3089.2	3083.2	3083.2	3087.5	3096.9
17.5°	3032.1	3026.1	3030.4	3036.3	3048.3
20°	2967.3	2963.0	2970.7	2980.1	2991.2
22.5°	2893.1	2891.4	2904.2	2917.0	2928.1
25°	2811.2	2814.7	2830.0	2846.2	2859.0
27.5°	2726.8	2730.2	2751.6	2768.6	2781.4
30°	2637.3	2639.0	2666.3	2686.8	2696.1
32.5°	2533.3	2546.9	2575.9	2595.5	2604.0
35°	2435.2	2448.9	2476.1	2500.9	2513.7
37.5°	2328.6	2340.6	2376.4	2402.8	2407.1
40°	2219.5	2230.6	2274.9	2297.1	2303.9
42.5°	2100.1	2121.4	2161.5	2183.7	2187.9
45°	1987.6	2003.8	2048.1	2072.0	2069.4
47.5°	1867.3	1885.2	1928.7	1951.8	1956.0
50°	1745.4	1765.9	1812.8	1828.1	1829.0
52.5°	1617.5	1643.9	1686.6	1707.0	1700.2
55°	1496.4	1517.7	1562.9	1577.4	1571.5
57.5°	1371.9	1395.8	1437.6	1445.3	1446.1
60°	1250.9	1270.5	1306.3	1314.0	1311.4
62.5°	1117.8	1137.5	1169.9	1177.5	1171.6
65°	990.8	1007.0	1037.7	1045.4	1035.1
67.5°	864.6	880.8	904.7	916.6	905.5
70°	742.7	755.5	776.8	783.6	784.5
72.5°	613.1	636.1	651.4	650.6	648.0
75°	498.0	508.2	526.9	528.7	530.4
77.5°	388.0	390.5	410.1	415.2	411.8
80°	278.0	287.3	298.4	304.4	305.3
82.5°	183.3	190.1	199.5	209.8	209.8
85°	105.7	108.3	116.0	126.2	130.5
87.5°	42.6	46.9	54.6	62.2	63.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)