

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: P231780

Luminaire Tested: **24GR-LD5-120-F1-UNV-L930-CD2-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231780  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33304)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-120-F1-UNV-L930-CD2-U  
Description: METALUX 2X4 GRLED TROFFER  
WITH F1 LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9671.1 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.27  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

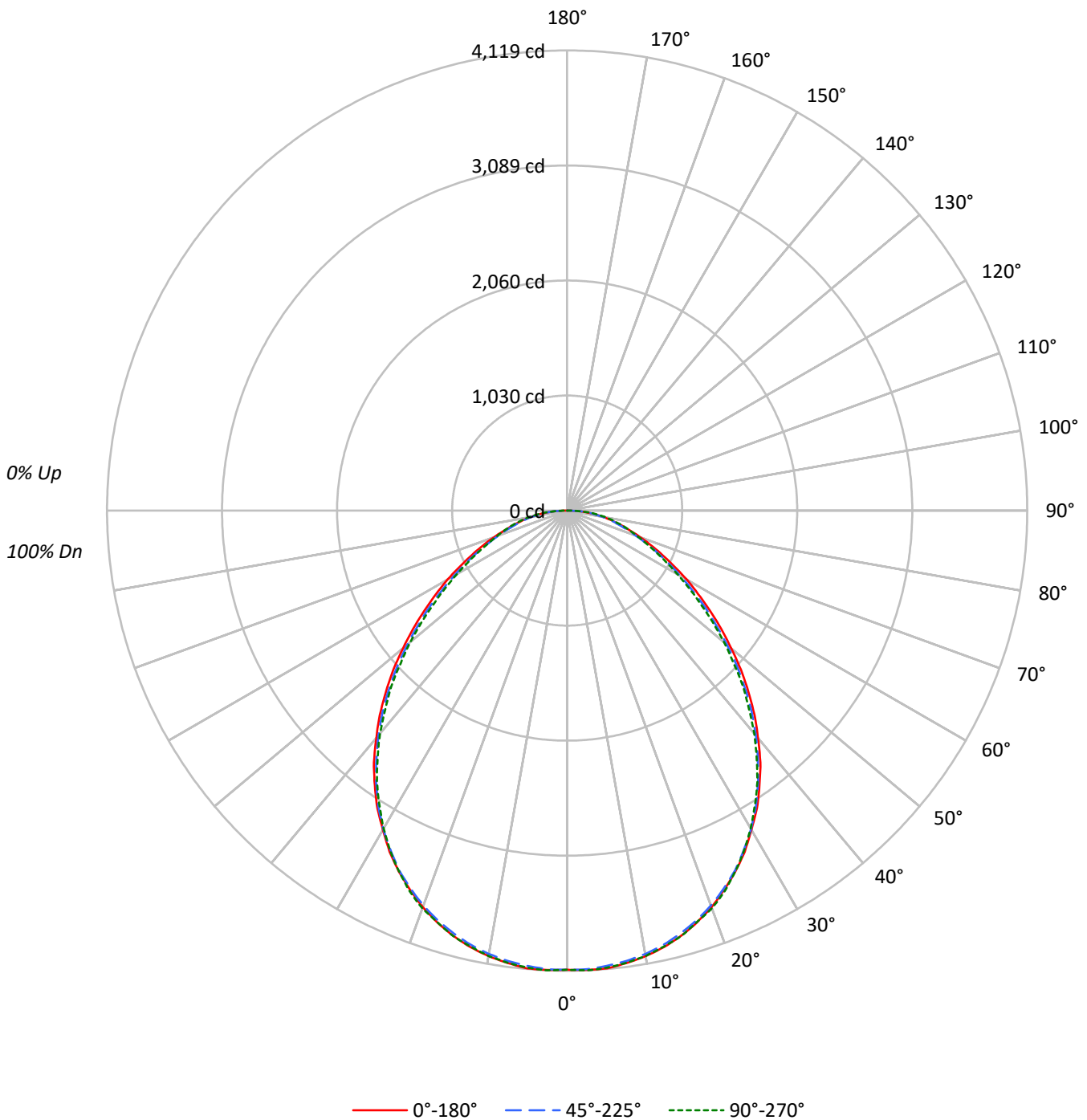
Input Watts (W): 90.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	90	80	73	68	78	71	66	75	70	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

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

	0°	45°	90°
0°	6295	6295	6295
5°	6324	6289	6315
10°	6298	6268	6296
15°	6249	6215	6254
20°	6157	6133	6177
25°	6024	6008	6021
30°	5833	5823	5809
35°	5613	5571	5548
40°	5313	5253	5211
45°	4970	4879	4820
50°	4567	4445	4369
55°	4166	4012	3895
60°	3783	3579	3487
65°	3408	3216	3161
70°	3120	2918	2999
75°	2916	2782	2988
80°	2893	2840	3120
85°	2949	2975	3400



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	389.0	4.0
10°-20°	1105.9	11.4
20°-30°	1633.8	16.9
30°-40°	1857.5	19.2
40°-50°	1734.6	17.9
50°-60°	1348.9	13.9
60°-70°	895.1	9.3
70°-80°	518.0	5.4
80°-90°	188.3	1.9
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°	3128.7	32.4
0°-40°	4986.2	51.6
0°-60°	8069.7	83.4
0°-90°	9671.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9671.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4110	4110	4110	4110	4110	
5°	4113	4092	4091	4098	4107	390
15°	3941	3921	3920	3918	3944	1110
25°	3564	3549	3555	3548	3563	1639
35°	3002	2987	2980	2958	2967	1874
45°	2295	2277	2252	2224	2225	1768
55°	1560	1537	1503	1463	1459	1399
65°	940	912	887	871	872	940
75°	493	481	470	491	505	527
85°	168	165	169	192	194	182
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4110.2	4110.2	4110.2	4110.2	4110.2
2.5°	4116.2	4104.2	4110.2	4105.7	4119.3
5°	4113.2	4092.0	4090.6	4098.1	4107.2
7.5°	4084.5	4061.9	4066.4	4066.4	4081.5
10°	4049.7	4027.1	4030.1	4031.6	4048.3
12.5°	4002.9	3980.2	3981.8	3980.2	3996.8
15°	3940.9	3921.2	3919.8	3918.2	3944.0
17.5°	3865.3	3838.1	3847.2	3848.7	3862.3
20°	3777.7	3756.5	3762.5	3761.0	3789.7
22.5°	3673.4	3658.2	3662.8	3659.7	3687.0
25°	3564.5	3549.4	3555.4	3547.9	3563.0
27.5°	3442.0	3431.5	3425.4	3420.9	3431.5
30°	3298.4	3292.4	3292.4	3272.8	3284.8
32.5°	3162.4	3142.7	3142.7	3135.2	3127.6
35°	3002.2	2987.0	2979.5	2958.3	2967.4
37.5°	2842.0	2807.2	2804.2	2787.5	2787.5
40°	2657.5	2637.9	2627.3	2609.2	2606.1
42.5°	2482.1	2462.5	2444.3	2414.2	2408.1
45°	2294.7	2276.6	2252.4	2223.7	2225.2
47.5°	2108.8	2083.0	2060.4	2025.6	2021.1
50°	1916.7	1898.6	1865.4	1835.2	1833.7
52.5°	1736.9	1708.1	1678.0	1641.6	1641.6
55°	1560.0	1537.3	1502.6	1463.3	1458.8
57.5°	1390.7	1369.6	1330.3	1301.5	1294.0
60°	1235.0	1204.8	1168.5	1144.3	1138.2
62.5°	1079.4	1052.1	1024.9	1000.7	999.2
65°	940.3	911.5	887.3	870.8	872.2
67.5°	814.8	790.6	763.4	758.8	760.4
70°	696.8	671.2	651.5	662.1	669.7
72.5°	585.0	571.4	557.8	572.9	583.5
75°	492.8	480.7	470.1	491.3	504.9
77.5°	408.1	399.1	397.5	415.7	427.8
80°	328.0	317.4	322.0	343.2	353.7
82.5°	249.4	241.9	243.4	269.0	276.7
85°	167.8	164.7	169.3	192.0	193.5
87.5°	89.2	89.2	92.2	105.8	101.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)