

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: P475904

Luminaire Tested: **22GR-LD5-90-F1-UNV-L835-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475904  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-90-F1-UNV-L835-CD1-U  
Description: GR 2'X2' LED TROFFER w/ F1 LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9055.1 lumens  
Efficiency: N/A  
Efficacy: 130.7 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.17 / 1.24  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

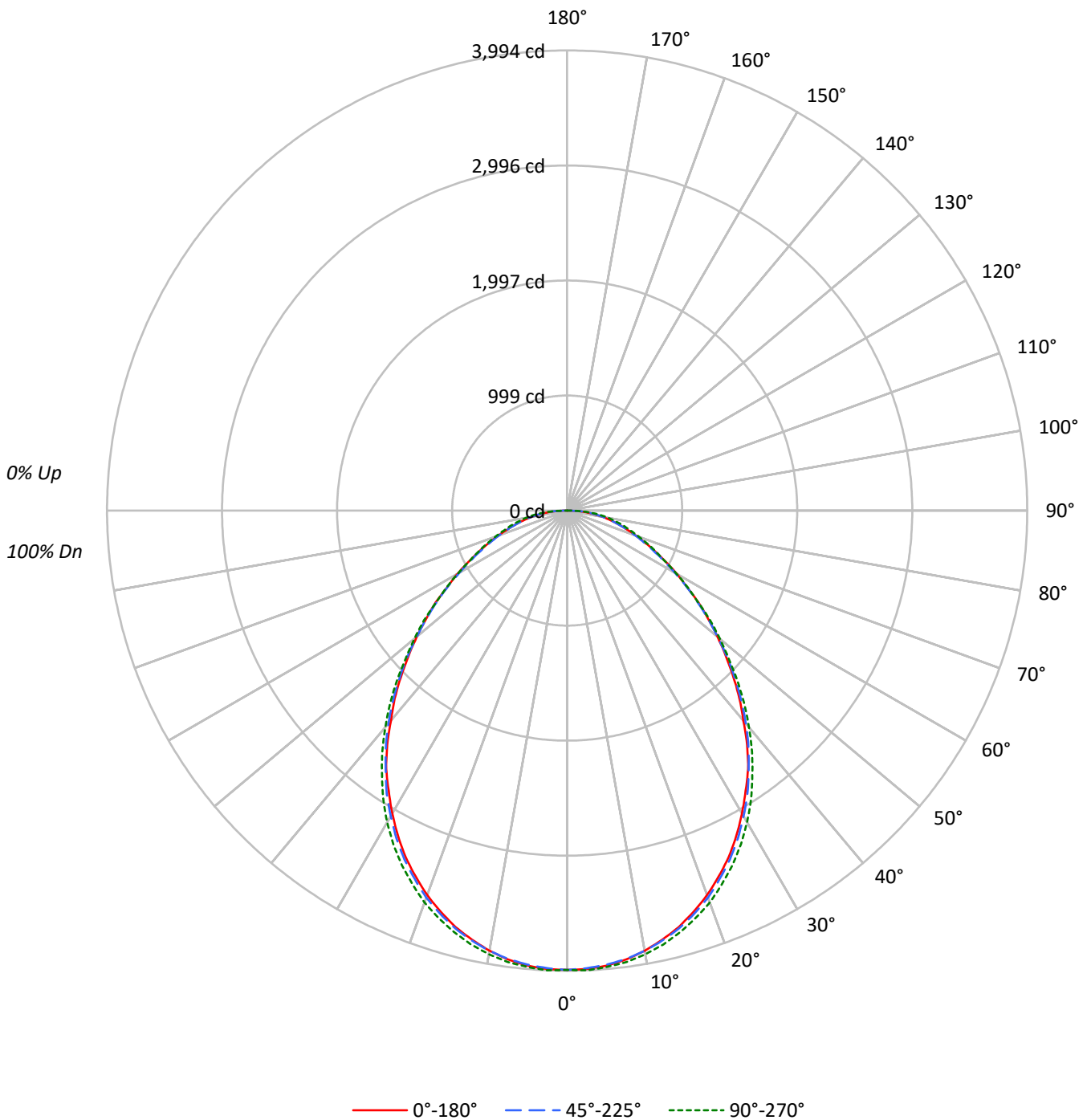
Input Watts (W): 69.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85					85			
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	90	80	73	68	78	71	66	75	70	65	72	68	64	62					62			
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37					37			
8	63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	36	34					34			
9	59	46	38	33	58	46	38	33	44	37	33	43	37	32	42	37	32	31					31			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28					28			

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

	0°	45°	90°
0°	10728	10728	10728
5°	10707	10687	10738
10°	10602	10602	10685
15°	10426	10458	10554
20°	10170	10236	10367
25°	9853	9921	10080
30°	9433	9516	9706
35°	8995	9020	9208
40°	8357	8478	8625
45°	7760	7833	7949
50°	7130	7130	7242
55°	6539	6468	6503
60°	5919	5816	5899
65°	5398	5277	5447
70°	4987	4958	5198
75°	4805	4764	5241
80°	4852	4852	5563
85°	5070	5304	6367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	375.9	4.2
10°-20°	1058.3	11.7
20°-30°	1538.7	17.0
30°-40°	1722.4	19.0
40°-50°	1589.7	17.6
50°-60°	1240.5	13.7
60°-70°	839.7	9.3
70°-80°	501.4	5.5
80°-90°	188.4	2.1
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°	2972.9	32.8
0°-40°	4695.3	51.9
0°-60°	7525.5	83.1
0°-90°	9055.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9055.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3987	3987	3987	3987	3987	
5°	3964	3956	3956	3972	3975	376
15°	3742	3742	3754	3777	3788	1053
25°	3318	3318	3341	3376	3395	1524
35°	2738	2734	2746	2788	2803	1703
45°	2039	2051	2058	2074	2089	1573
55°	1394	1382	1379	1386	1386	1244
65°	848	840	829	844	855	844
75°	462	458	458	485	504	491
85°	164	160	172	199	206	175
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3986.7	3986.7	3986.7	3986.7	3986.7
2.5°	3982.9	3975.3	3975.3	3986.7	3994.4
5°	3963.8	3956.2	3956.2	3971.5	3975.3
7.5°	3929.5	3925.6	3925.6	3940.9	3952.4
10°	3879.8	3876.0	3879.8	3895.1	3910.4
12.5°	3814.9	3814.9	3822.5	3841.6	3856.9
15°	3742.3	3742.3	3753.8	3776.7	3788.2
17.5°	3650.7	3654.5	3669.8	3696.5	3708.0
20°	3551.4	3559.0	3574.3	3597.2	3620.1
22.5°	3436.8	3444.5	3459.8	3494.1	3509.4
25°	3318.5	3318.5	3341.4	3375.7	3394.8
27.5°	3181.0	3184.8	3207.7	3245.9	3265.0
30°	3035.9	3047.3	3062.6	3097.0	3123.7
32.5°	2883.1	2894.6	2913.7	2951.9	2971.0
35°	2738.0	2734.2	2745.7	2787.7	2802.9
37.5°	2566.2	2570.0	2585.3	2615.8	2634.9
40°	2379.1	2398.2	2413.4	2436.3	2455.4
42.5°	2214.9	2226.3	2237.8	2260.7	2276.0
45°	2039.2	2050.7	2058.3	2073.6	2088.8
47.5°	1867.4	1871.2	1882.6	1890.3	1901.7
50°	1703.1	1707.0	1703.1	1714.6	1729.9
52.5°	1542.8	1538.9	1538.9	1542.8	1565.7
55°	1393.8	1382.4	1378.6	1386.2	1386.2
57.5°	1229.6	1225.8	1225.8	1222.0	1241.1
60°	1099.8	1088.3	1080.7	1088.3	1096.0
62.5°	966.1	954.7	947.0	962.3	962.3
65°	847.8	840.1	828.7	843.9	855.4
67.5°	733.2	725.6	721.7	740.8	756.1
70°	633.9	630.1	630.1	649.2	660.6
72.5°	542.3	538.4	538.4	565.2	576.6
75°	462.1	458.2	458.2	485.0	504.1
77.5°	381.9	378.1	389.5	412.4	431.5
80°	313.1	309.3	313.1	343.7	359.0
82.5°	236.8	236.8	244.4	274.9	290.2
85°	164.2	160.4	171.8	198.6	206.2
87.5°	84.0	87.8	91.6	106.9	106.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)