

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: P476011

Luminaire Tested: **22GR-LD5-85-A19/156-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P476011  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-85-A19/156-UNV-L840-CD1-U  
Description: GR 2'X2' LED TROFFER w/ A19/156 LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8272.7 lumens  
Efficiency: N/A  
Efficacy: 127.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.22 / 1.23  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

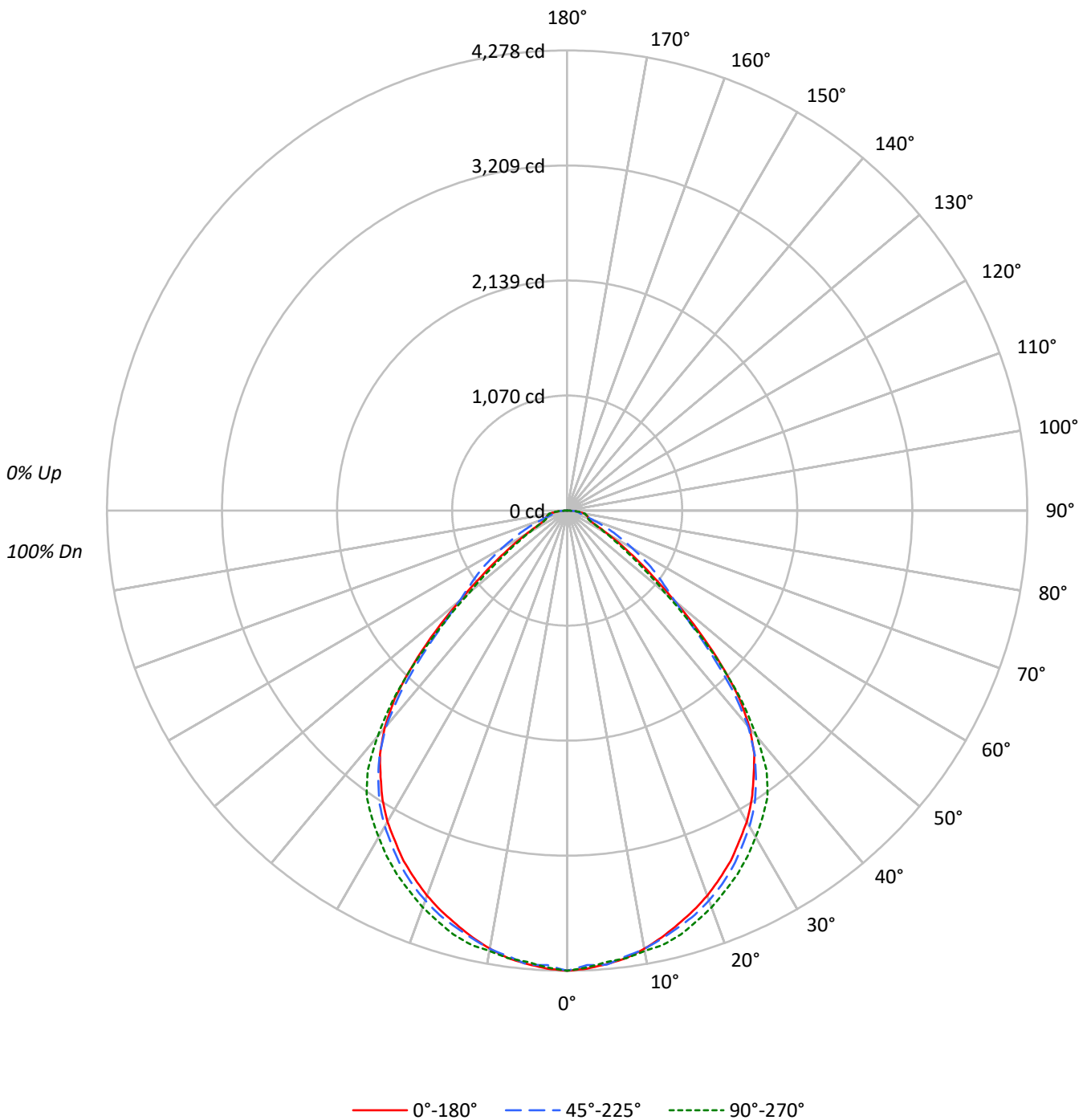
Input Watts (W): 64.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90	88					88			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77					77			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68					68			
4	88	78	70	65	86	77	70	64	74	68	63	72	67	63	70	65	62	60					60			
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53					53			
6	76	65	57	51	75	64	56	51	62	55	50	60	54	50	59	54	50	48					48			
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43					43			
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39					39			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36					36			
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33					33			

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

	0°	45°	90°
0°	11511	11511	11511
5°	11431	11444	11380
10°	11303	11307	11359
15°	11095	11170	11369
20°	10909	11045	11241
25°	10674	10839	11094
30°	10376	10534	10894
35°	9932	10057	10673
40°	9271	9198	9628
45°	7699	7264	7632
50°	5424	5451	4972
55°	3643	4686	3278
60°	2350	3760	2179
65°	1628	2912	1567
70°	1637	1987	1624
75°	2014	1552	1997
80°	2461	1796	2608
85°	2402	2452	2646



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	400.5	4.8
10°-20°	1133.7	13.7
20°-30°	1681.3	20.3
30°-40°	1923.3	23.2
40°-50°	1522.5	18.4
50°-60°	830.7	10.0
60°-70°	434.6	5.3
70°-80°	251.0	3.0
80°-90°	94.9	1.1
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°	3215.6	38.9
0°-40°	5138.9	62.1
0°-60°	7492.2	90.6
0°-90°	8272.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8272.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4278	4278	4278	4278	4278	
5°	4232	4202	4236	4222	4213	401
15°	3982	4003	4009	4041	4081	1123
25°	3595	3600	3651	3697	3736	1653
35°	3023	3023	3062	3173	3249	1886
45°	2023	2012	1909	2002	2006	1538
55°	776	970	999	930	699	720
65°	256	514	457	489	246	276
75°	194	310	149	305	192	201
85°	78	102	79	103	86	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4277.8	4277.8	4277.8	4277.8	4277.8
2.5°	4261.9	4236.5	4230.2	4242.9	4250.8
5°	4231.8	4201.6	4236.5	4222.2	4212.7
7.5°	4196.8	4185.7	4179.4	4201.6	4196.8
10°	4136.5	4120.6	4138.1	4150.8	4157.1
12.5°	4063.4	4071.4	4074.5	4114.2	4133.3
15°	3982.5	4003.1	4009.4	4041.2	4080.9
17.5°	3899.9	3904.6	3942.8	3984.0	4003.1
20°	3809.4	3817.3	3857.0	3895.1	3925.3
22.5°	3703.0	3712.5	3761.7	3804.6	3830.0
25°	3595.0	3599.8	3650.6	3696.6	3736.3
27.5°	3464.8	3490.2	3520.4	3583.9	3626.8
30°	3339.4	3355.2	3390.2	3460.0	3506.1
32.5°	3191.7	3198.0	3242.5	3318.7	3380.6
35°	3023.4	3023.4	3061.5	3172.6	3248.8
37.5°	2856.6	2834.4	2864.6	2991.6	3045.6
40°	2639.1	2623.2	2618.4	2705.8	2740.7
42.5°	2372.3	2342.2	2288.2	2377.1	2405.7
45°	2023.0	2011.9	1908.7	2002.3	2005.5
47.5°	1657.8	1665.7	1549.8	1643.5	1573.6
50°	1295.7	1378.3	1302.1	1341.8	1187.7
52.5°	1008.3	1162.3	1133.8	1117.9	908.3
55°	776.5	970.2	998.8	930.5	698.7
57.5°	592.3	827.3	844.8	797.1	531.9
60°	436.7	698.7	698.7	676.4	404.9
62.5°	325.5	600.2	568.5	574.8	309.6
65°	255.7	514.5	457.3	489.1	246.1
67.5°	214.4	428.7	346.2	422.4	214.4
70°	208.0	373.2	252.5	381.1	206.4
72.5°	206.4	343.0	189.0	346.2	208.0
75°	193.7	309.6	149.3	304.9	192.1
77.5°	177.8	257.2	123.9	257.2	179.4
80°	158.8	195.3	115.9	200.1	168.3
82.5°	122.3	139.7	103.2	141.3	130.2
85°	77.8	101.6	79.4	103.2	85.7
87.5°	34.9	54.0	34.9	55.6	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)