

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: P475645

Luminaire Tested: **24GR-LD5-48-A19/156-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475645  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-48-A19/156-UNV-L830-CD1-U  
Description: GR 2'X4' LED TROFFER w/ A19/156 LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4451.6 lumens  
Efficiency: N/A  
Efficacy: 134.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.25 / 1.28  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

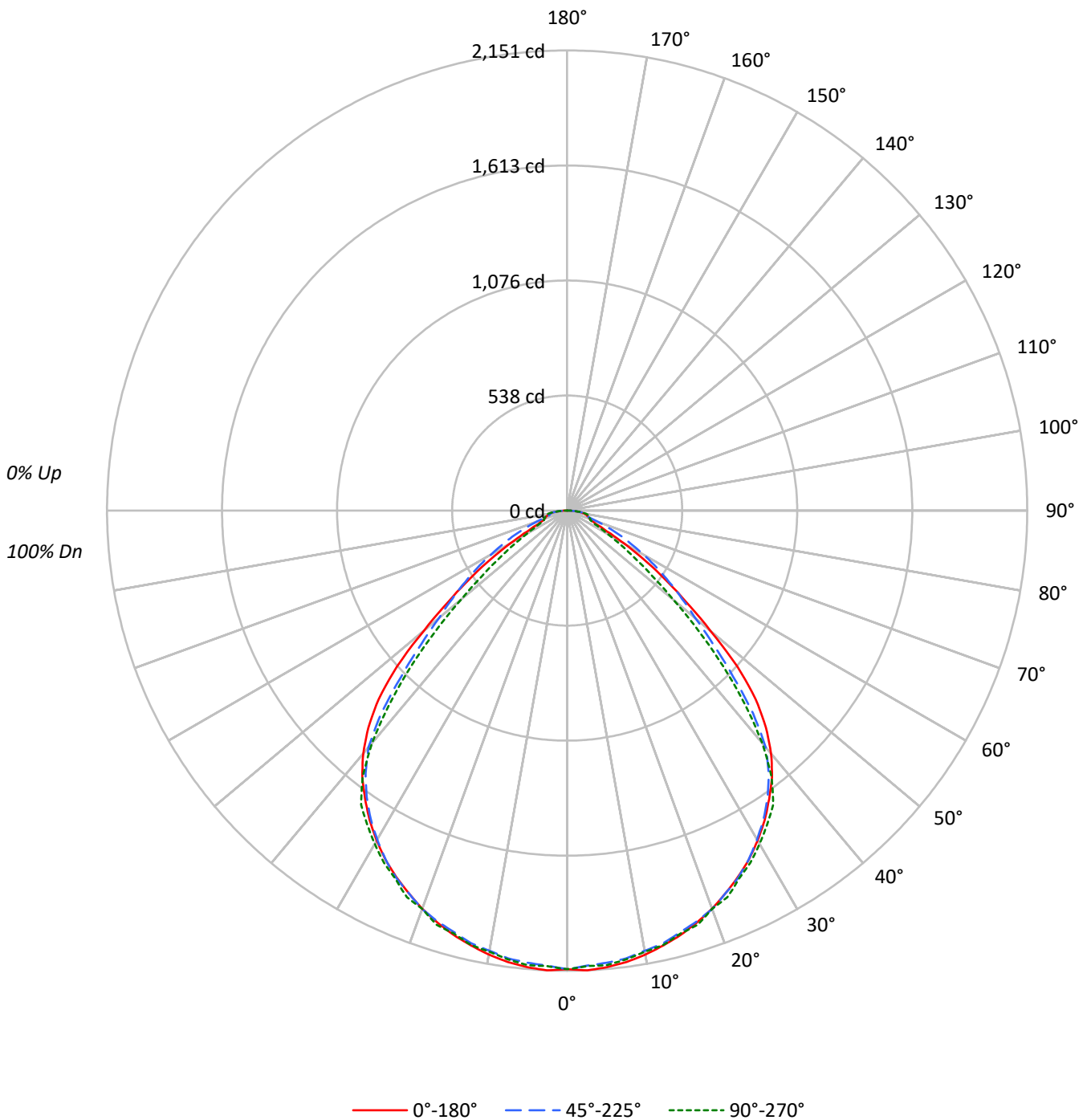
Input Watts (W): 33  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	104	101	98	100	98	95	96	94	92	93	91	90				88	
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78				76	
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69				67	
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61				59	
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54				52	
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49				47	
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	40	65	53	46	40	52	45	40	50	44	40	49	44	40				38	
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36				34	
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33				31	

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

	0°	45°	90°
0°	2884	2884	2884
5°	2893	2865	2880
10°	2879	2854	2861
15°	2860	2842	2852
20°	2836	2838	2836
25°	2806	2810	2820
30°	2766	2758	2795
35°	2704	2684	2758
40°	2605	2537	2491
45°	2371	2087	1969
50°	1830	1636	1353
55°	1300	1365	895
60°	823	1102	584
65°	478	867	427
70°	442	597	453
75°	509	455	540
80°	635	628	713
85°	693	735	763



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.0	4.5
10°-20°	577.8	13.0
20°-30°	871.8	19.6
30°-40°	1023.3	23.0
40°-50°	861.5	19.4
50°-60°	489.4	11.0
60°-70°	244.2	5.5
70°-80°	128.1	2.9
80°-90°	53.4	1.2
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°	1651.7	37.1
0°-40°	2675.0	60.1
0°-60°	4025.9	90.4
0°-90°	4451.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4451.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2144	2144	2144	2144	2144	
5°	2142	2127	2121	2125	2132	203
15°	2053	2048	2040	2046	2047	579
25°	1890	1891	1893	1898	1899	870
35°	1646	1637	1634	1661	1679	1028
45°	1246	1196	1097	1078	1035	938
55°	554	593	582	502	382	504
65°	150	311	272	231	134	171
75°	98	151	88	131	104	104
85°	45	54	48	60	49	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2143.6	2143.6	2143.6	2143.6	2143.6
2.5°	2151.3	2140.9	2129.1	2125.9	2131.4
5°	2142.3	2126.8	2121.4	2125.0	2132.3
7.5°	2128.2	2112.3	2111.4	2105.1	2116.0
10°	2107.4	2096.9	2089.2	2092.9	2094.2
12.5°	2081.1	2077.9	2072.0	2067.0	2079.3
15°	2053.4	2048.4	2040.3	2045.7	2047.1
17.5°	2018.1	2015.4	2014.0	2018.1	2029.9
20°	1980.5	1980.5	1981.8	1982.7	1980.9
22.5°	1935.6	1934.2	1936.1	1939.7	1956.9
25°	1889.8	1890.7	1893.0	1898.0	1899.3
27.5°	1839.1	1839.5	1838.6	1843.6	1855.4
30°	1780.6	1778.8	1775.2	1786.0	1798.7
32.5°	1717.2	1713.5	1709.5	1726.2	1739.8
35°	1646.0	1636.9	1633.8	1661.4	1679.1
37.5°	1573.0	1554.5	1547.7	1568.1	1570.3
40°	1483.3	1455.7	1444.3	1424.4	1418.5
42.5°	1375.4	1346.9	1285.7	1254.9	1233.1
45°	1246.3	1196.4	1096.7	1077.7	1034.6
47.5°	1079.5	1026.5	926.8	886.0	837.1
50°	874.2	843.4	781.8	731.0	646.3
52.5°	698.8	705.2	676.2	605.9	500.8
55°	554.3	592.8	581.9	501.7	381.6
57.5°	426.5	509.4	496.2	412.9	291.4
60°	305.9	436.4	409.7	339.9	217.1
62.5°	209.8	372.5	335.8	280.5	166.3
65°	150.0	310.9	272.4	231.1	134.1
67.5°	123.3	254.2	208.9	196.2	116.9
70°	112.4	204.8	151.8	171.3	115.1
72.5°	107.0	171.8	111.5	150.0	109.7
75°	97.9	150.9	87.5	131.4	103.8
77.5°	90.6	130.5	81.6	115.1	101.1
80°	82.0	103.3	81.1	97.4	92.0
82.5°	66.2	75.2	68.4	79.8	74.3
85°	44.9	53.5	47.6	60.3	49.4
87.5°	22.2	26.3	21.3	28.6	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)