

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: P475655

Luminaire Tested: **24GR-LD5-180-A19/156-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475655
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-180-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: 16561.4 lumens
Efficiency: N/A
Efficacy: 131.1 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

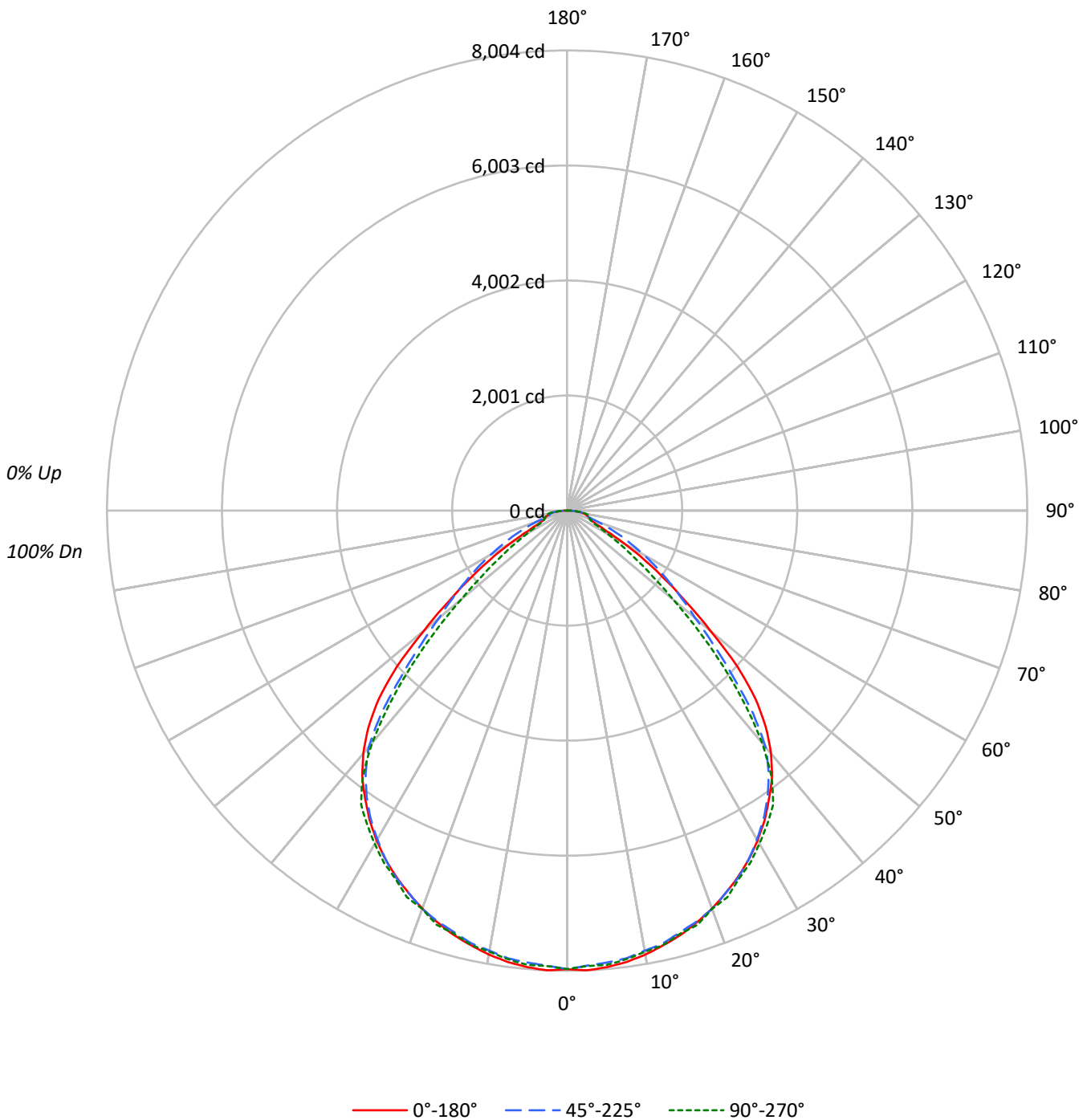
Input Watts (W): 126.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	10730	10730	10730
5°	10764	10660	10714
10°	10712	10619	10645
15°	10641	10573	10609
20°	10550	10557	10552
25°	10438	10455	10490
30°	10292	10261	10397
35°	10058	9984	10261
40°	9693	9438	9269
45°	8823	7764	7324
50°	6808	6088	5033
55°	4837	5078	3330
60°	3063	4102	2173
65°	1777	3226	1589
70°	1645	2222	1685
75°	1893	1692	2007
80°	2365	2338	2652
85°	2577	2732	2837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	751.5	4.5
10°-20°	2149.6	13.0
20°-30°	3243.5	19.6
30°-40°	3807.1	23.0
40°-50°	3205.1	19.4
50°-60°	1820.7	11.0
60°-70°	908.7	5.5
70°-80°	476.4	2.9
80°-90°	198.6	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°	6144.7	37.1
0°-40°	9951.9	60.1
0°-60°	14977.6	90.4
0°-90°	16561.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16561.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7975	7975	7975	7975	7975	
5°	7970	7913	7892	7906	7933	757
15°	7640	7621	7591	7611	7616	2154
25°	7031	7034	7043	7061	7066	3238
35°	6124	6090	6078	6181	6247	3824
45°	4637	4451	4080	4009	3849	3491
55°	2062	2205	2165	1866	1420	1876
65°	558	1157	1013	860	499	635
75°	364	562	325	489	386	386
85°	167	199	177	224	184	176
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7975.0	7975.0	7975.0	7975.0	7975.0
2.5°	8003.6	7964.9	7921.0	7909.2	7929.5
5°	7969.9	7912.6	7892.4	7905.9	7932.8
7.5°	7917.7	7858.6	7855.3	7831.7	7872.1
10°	7840.1	7801.3	7772.7	7786.1	7791.2
12.5°	7742.3	7730.5	7708.6	7690.0	7735.6
15°	7639.5	7620.9	7590.6	7610.8	7615.9
17.5°	7508.0	7497.8	7492.8	7508.0	7551.8
20°	7368.0	7368.0	7373.1	7376.4	7369.7
22.5°	7201.1	7196.0	7202.8	7216.3	7280.3
25°	7030.8	7034.2	7042.6	7061.2	7066.2
27.5°	6842.0	6843.7	6840.3	6858.8	6902.7
30°	6624.5	6617.7	6604.2	6644.7	6691.9
32.5°	6388.4	6374.9	6359.8	6422.1	6472.7
35°	6123.7	6090.0	6078.2	6181.0	6246.8
37.5°	5852.3	5783.1	5757.8	5833.7	5842.1
40°	5518.4	5415.6	5373.4	5299.2	5277.3
42.5°	5117.1	5010.9	4783.3	4668.7	4587.7
45°	4636.6	4451.2	4080.2	4009.4	3849.2
47.5°	4016.2	3818.9	3448.0	3296.2	3114.1
50°	3252.4	3137.7	2908.4	2719.6	2404.3
52.5°	2599.9	2623.5	2515.6	2254.2	1863.1
55°	2062.0	2205.3	2164.9	1866.5	1419.6
57.5°	1586.6	1895.1	1846.2	1536.0	1084.1
60°	1138.1	1623.7	1524.2	1264.5	807.6
62.5°	780.6	1385.9	1249.4	1043.7	618.8
65°	558.1	1156.6	1013.3	859.9	499.1
67.5°	458.6	945.9	777.3	730.1	435.0
70°	418.1	762.1	564.8	637.3	428.3
72.5°	397.9	639.0	414.8	558.1	408.0
75°	364.2	561.5	325.4	489.0	386.1
77.5°	337.2	485.6	303.5	428.3	376.0
80°	305.2	384.4	301.8	362.5	342.3
82.5°	246.2	279.9	254.6	296.7	276.5
85°	166.9	199.0	177.0	224.2	183.8
87.5°	82.6	97.8	79.2	106.2	80.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)