

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: P476012

Luminaire Tested: **22GR-LD5-90-A19/156-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476012
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22GR-LD5-90-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: 8768.3 lumens
Efficiency: N/A
Efficacy: 126.5 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

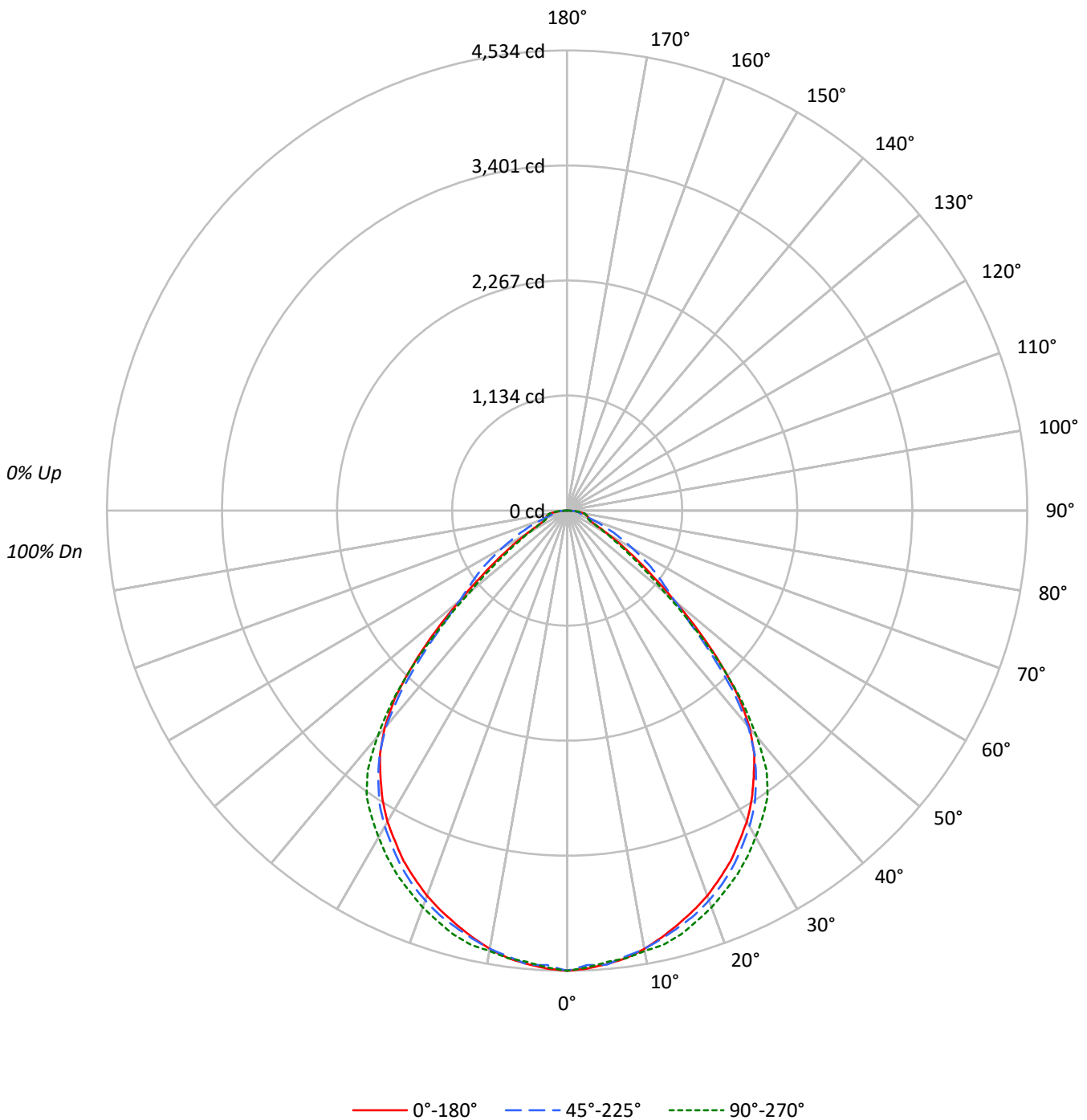
Input Watts (W): 69.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P476012

CATALOG NUMBER: 22GR-LD5-90-A19/156-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P476012

CATALOG NUMBER: 22GR-LD5-90-A19/156-UNV-L840-CD1-U

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°	12201	12201	12201
5°	12116	12129	12061
10°	11980	11985	12040
15°	11759	11839	12050
20°	11562	11707	11914
25°	11314	11489	11758
30°	10998	11165	11547
35°	10527	10660	11312
40°	9826	9749	10204
45°	8160	7699	8090
50°	5750	5778	5270
55°	3861	4967	3474
60°	2491	3985	2310
65°	1726	3086	1661
70°	1735	2105	1721
75°	2135	1645	2117
80°	2608	1905	2765
85°	2547	2600	2807



TEST NUMBER: P476012

CATALOG NUMBER: 22GR-LD5-90-A19/156-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	424.5	4.8
10°-20°	1201.7	13.7
20°-30°	1782.1	20.3
30°-40°	2038.5	23.2
40°-50°	1613.7	18.4
50°-60°	880.5	10.0
60°-70°	460.7	5.3
70°-80°	266.0	3.0
80°-90°	100.6	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°	3408.3	38.9
0°-40°	5446.8	62.1
0°-60°	7941.0	90.6
0°-90°	8768.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8768.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4534	4534	4534	4534	4534	
5°	4485	4453	4490	4475	4465	425
15°	4221	4243	4250	4283	4325	1191
25°	3810	3815	3869	3918	3960	1752
35°	3204	3204	3245	3363	3444	1999
45°	2144	2132	2023	2122	2126	1630
55°	823	1028	1059	986	740	763
65°	271	545	485	518	261	292
75°	205	328	158	323	204	213
85°	82	108	84	109	91	91
90°	0	0	0	0	0	



TEST NUMBER: P476012

CATALOG NUMBER: 22GR-LD5-90-A19/156-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4534.1	4534.1	4534.1	4534.1	4534.1
2.5°	4517.3	4490.3	4483.6	4497.1	4505.5
5°	4485.3	4453.3	4490.3	4475.2	4465.1
7.5°	4448.3	4436.5	4429.7	4453.3	4448.3
10°	4384.3	4367.5	4386.0	4399.4	4406.2
12.5°	4306.9	4315.3	4318.7	4360.7	4380.9
15°	4221.0	4242.9	4249.7	4283.3	4325.4
17.5°	4133.5	4138.6	4179.0	4222.7	4242.9
20°	4037.6	4046.0	4088.1	4128.5	4160.5
22.5°	3924.8	3934.9	3987.1	4032.5	4059.5
25°	3810.4	3815.4	3869.3	3918.1	3960.2
27.5°	3672.4	3699.3	3731.3	3798.6	3844.0
30°	3539.4	3556.2	3593.3	3667.3	3716.1
32.5°	3382.9	3389.6	3436.8	3517.5	3583.2
35°	3204.5	3204.5	3244.9	3362.7	3443.5
37.5°	3027.8	3004.2	3036.2	3170.8	3228.1
40°	2797.2	2780.4	2775.3	2867.9	2904.9
42.5°	2514.4	2482.5	2425.2	2519.5	2549.8
45°	2144.2	2132.4	2023.0	2122.3	2125.7
47.5°	1757.1	1765.5	1642.6	1741.9	1667.9
50°	1373.4	1460.9	1380.1	1422.2	1258.9
52.5°	1068.7	1232.0	1201.7	1184.9	962.7
55°	823.0	1028.3	1058.6	986.3	740.5
57.5°	627.8	876.9	895.4	844.9	563.8
60°	462.8	740.5	740.5	717.0	429.2
62.5°	345.0	636.2	602.5	609.3	328.2
65°	271.0	545.3	484.7	518.4	260.9
67.5°	227.2	454.4	366.9	447.7	227.2
70°	220.5	395.5	267.6	403.9	218.8
72.5°	218.8	363.5	200.3	366.9	220.5
75°	205.3	328.2	158.2	323.1	203.6
77.5°	188.5	272.7	131.3	272.7	190.2
80°	168.3	207.0	122.9	212.1	178.4
82.5°	129.6	148.1	109.4	149.8	138.0
85°	82.5	107.7	84.2	109.4	90.9
87.5°	37.0	57.2	37.0	58.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)