

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: P293923

Luminaire Tested: **24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P293923  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33308)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3398.0 lumens  
Efficiency: N/A  
Efficacy: 147.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.25  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

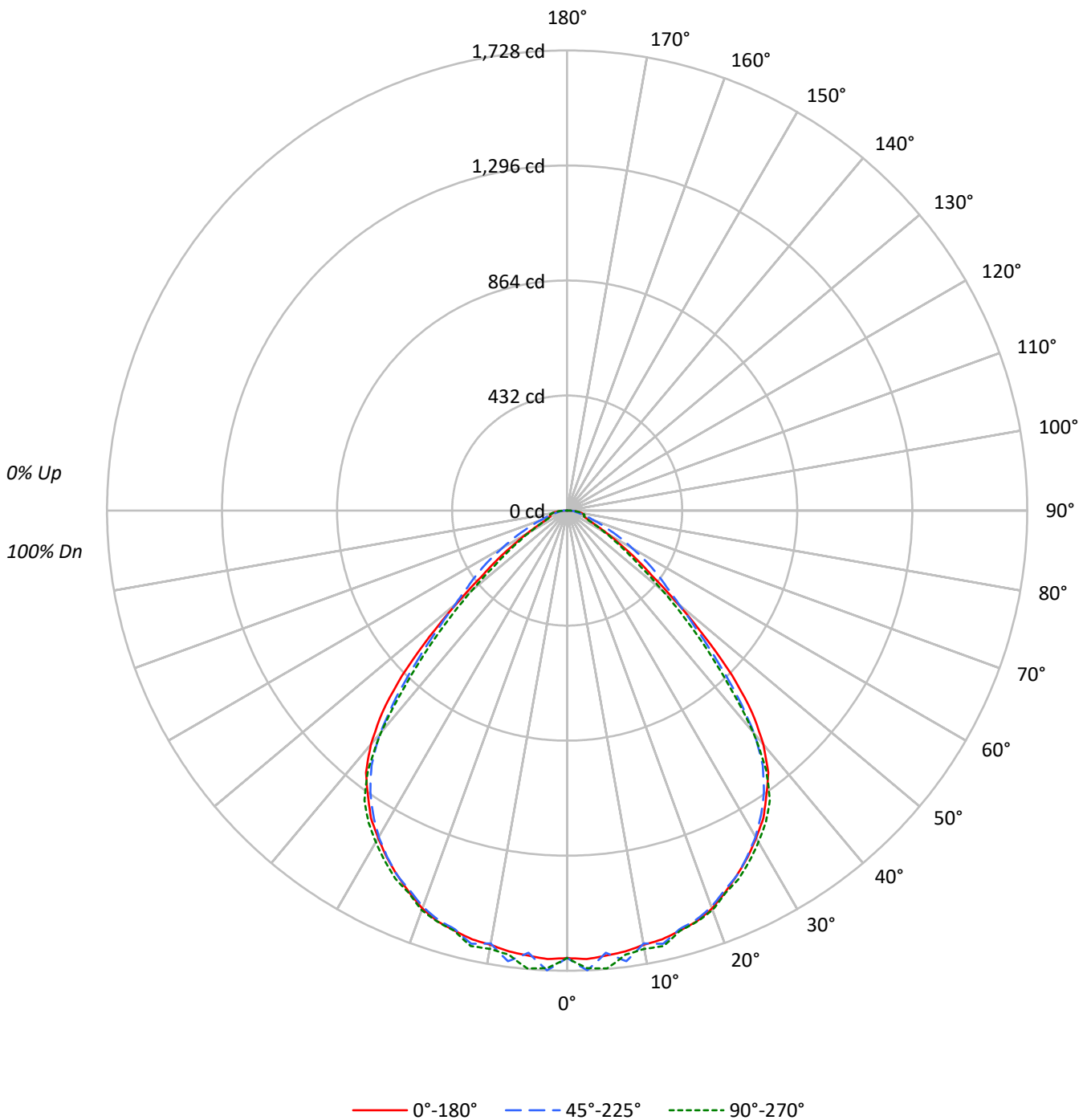
Input Watts (W): 22.971  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P293923

CATALOG NUMBER: 24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P293923

CATALOG NUMBER: 24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K

**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	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77					77			
3	95	86	79	74	93	85	78	73	82	77	72	79	75	71	77	73	70	68					68			
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	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	55	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	55	47	42	65	54	47	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°	2261	2261	2261
5°	2266	2251	2331
10°	2262	2255	2283
15°	2275	2267	2277
20°	2277	2267	2286
25°	2242	2243	2265
30°	2204	2198	2233
35°	2142	2116	2180
40°	2012	1922	1911
45°	1668	1509	1431
50°	1122	1145	978
55°	740	960	641
60°	474	758	439
65°	306	578	297
70°	271	414	271
75°	349	329	352
80°	427	284	448
85°	497	421	522



TEST NUMBER: P293923

CATALOG NUMBER: 24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.9	4.7
10°-20°	461.9	13.6
20°-30°	695.4	20.5
30°-40°	806.0	23.7
40°-50°	629.6	18.5
50°-60°	336.2	9.9
60°-70°	172.9	5.1
70°-80°	97.8	2.9
80°-90°	37.1	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°	1318.2	38.8
0°-40°	2124.3	62.5
0°-60°	3090.1	90.9
0°-90°	3398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3398.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1680	1680	1680	1680	1680	
5°	1678	1724	1667	1712	1726	160
15°	1633	1644	1628	1638	1634	461
25°	1510	1505	1511	1509	1526	696
35°	1304	1298	1288	1314	1327	813
45°	876	877	793	786	752	660
55°	315	399	409	369	273	291
65°	96	200	182	200	93	106
75°	67	126	63	118	68	68
85°	32	42	27	42	34	33
90°	0	0	0	0	0	



TEST NUMBER: P293923

CATALOG NUMBER: 24GR-LD5-34-A19/156-UNV-L83050-W2A1-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1680.2	1680.2	1680.2	1680.2	1680.2
2.5°	1685.7	1716.2	1728.2	1713.5	1720.0
5°	1677.5	1724.4	1666.6	1712.4	1725.5
7.5°	1669.8	1664.9	1707.0	1663.3	1681.9
10°	1655.7	1658.9	1650.7	1681.9	1670.9
12.5°	1649.1	1668.2	1666.6	1650.7	1674.8
15°	1633.3	1643.7	1627.8	1638.2	1634.4
17.5°	1617.5	1612.5	1610.9	1615.3	1619.1
20°	1590.2	1573.8	1583.6	1584.7	1596.7
22.5°	1550.9	1541.1	1543.2	1553.1	1554.2
25°	1510.0	1505.0	1511.0	1508.9	1525.8
27.5°	1467.4	1460.8	1464.7	1472.8	1483.2
30°	1418.8	1417.2	1414.5	1421.6	1437.4
32.5°	1370.8	1357.7	1355.5	1370.3	1388.3
35°	1304.2	1298.2	1288.4	1314.0	1327.1
37.5°	1240.9	1222.4	1206.5	1221.8	1227.3
40°	1145.4	1131.2	1094.1	1095.8	1088.1
42.5°	1028.1	1017.7	946.8	934.2	913.0
45°	876.4	876.9	792.9	785.8	752.0
47.5°	700.1	731.2	658.1	649.9	599.7
50°	535.9	592.1	546.8	533.7	467.1
52.5°	402.2	484.6	470.4	442.0	350.3
55°	315.4	398.9	409.3	368.9	273.4
57.5°	237.4	328.5	345.4	312.1	211.2
60°	176.3	276.7	281.6	268.5	163.2
62.5°	131.0	235.2	228.6	230.3	121.1
65°	96.0	200.3	181.7	199.7	93.3
67.5°	78.6	173.5	141.3	173.0	75.9
70°	68.8	153.9	105.3	152.3	68.8
72.5°	66.6	141.3	83.5	135.3	67.1
75°	67.1	126.1	63.3	117.9	67.7
77.5°	61.7	103.7	48.0	100.4	64.4
80°	55.1	78.6	36.6	79.7	57.8
82.5°	46.9	57.3	29.5	58.9	48.6
85°	32.2	42.0	27.3	42.0	33.8
87.5°	15.3	25.1	16.9	24.0	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)