

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: P292549

Luminaire Tested: **22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292549  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33284)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4502.0 lumens  
Efficiency: N/A  
Efficacy: 125.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.21  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

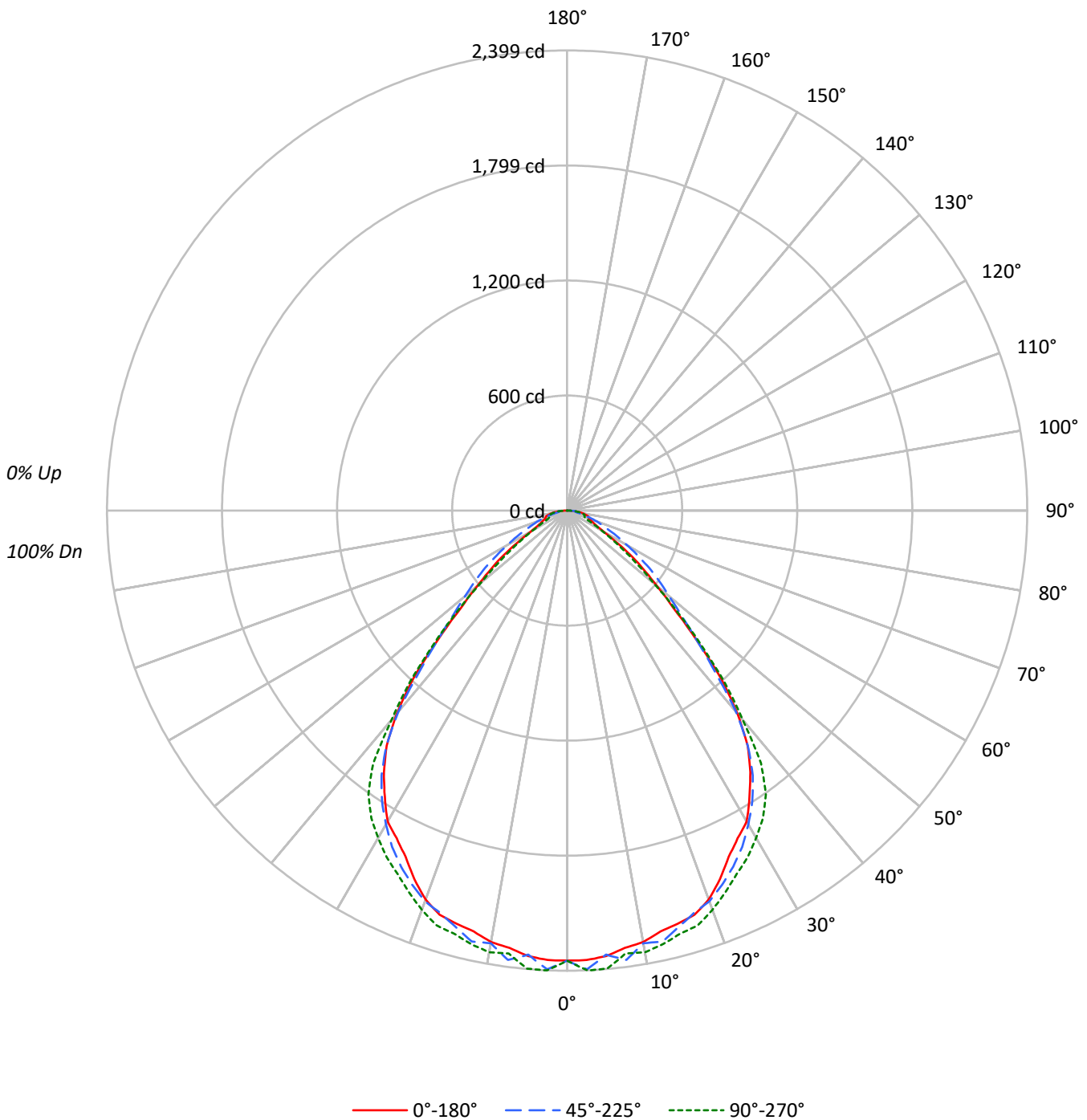
Input Watts (W): 35.991  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P292549

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P292549

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K

**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	91	90					88				
2	103	96	90	85	100	94	89	85	91	86	83	88	84	81	85	82	79					77				
3	95	86	79	74	93	85	79	73	82	77	72	79	75	71	77	73	70					68				
4	88	78	71	65	86	77	70	64	75	68	64	72	67	63	70	66	62					60				
5	82	71	63	58	80	70	63	57	68	62	57	66	61	56	64	59	56					54				
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50					48				
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45					44				
8	67	55	47	42	66	54	47	42	53	46	42	52	46	41	51	45	41					40				
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38					36				
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35					33				

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

	0°	45°	90°
0°	6314	6314	6314
5°	6298	6278	6475
10°	6240	6258	6388
15°	6211	6259	6359
20°	6178	6209	6342
25°	5915	6082	6208
30°	5817	5870	6121
35°	5471	5540	5934
40°	4848	4814	5004
45°	3621	3629	3730
50°	2549	2900	2469
55°	1881	2449	1687
60°	1176	1935	1102
65°	959	1533	770
70°	951	1277	759
75°	1180	938	981
80°	1316	739	1199
85°	1309	1377	1343



TEST NUMBER: P292549

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.4	5.0
10°-20°	636.2	14.1
20°-30°	942.2	20.9
30°-40°	1055.5	23.4
40°-50°	775.5	17.2
50°-60°	433.5	9.6
60°-70°	241.6	5.4
70°-80°	141.9	3.2
80°-90°	52.2	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°	1801.8	40.0
0°-40°	2857.2	63.5
0°-60°	4066.3	90.3
0°-90°	4502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4502.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2346	2346	2346	2346	2346	
5°	2332	2375	2324	2372	2397	221
15°	2230	2243	2247	2281	2283	630
25°	1992	2008	2048	2077	2091	923
35°	1665	1666	1686	1763	1806	1032
45°	952	1029	954	1022	980	743
55°	401	488	522	521	360	358
65°	151	267	241	309	121	156
75°	114	160	90	181	94	114
85°	42	63	45	57	44	46
90°	0	0	0	0	0	



TEST NUMBER: P292549

CATALOG NUMBER: 22GR-LD5-43-A19/156-UNV-L83050-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2346.3	2346.3	2346.3	2346.3	2346.3
2.5°	2345.3	2366.5	2394.0	2397.2	2399.4
5°	2331.5	2375.0	2324.0	2371.8	2397.2
7.5°	2299.6	2326.2	2363.3	2315.6	2329.3
10°	2283.7	2290.1	2290.1	2349.5	2337.8
12.5°	2247.7	2290.1	2300.7	2289.0	2314.5
15°	2229.6	2243.4	2246.6	2280.6	2282.7
17.5°	2209.5	2206.3	2198.9	2223.3	2266.8
20°	2157.5	2145.8	2168.1	2197.8	2214.8
22.5°	2081.1	2084.3	2110.8	2135.2	2154.3
25°	1992.0	2007.9	2048.3	2076.9	2090.7
27.5°	1925.2	1948.5	1976.1	2010.1	2037.6
30°	1872.2	1870.1	1889.1	1937.9	1969.8
32.5°	1769.3	1776.7	1796.9	1855.2	1899.8
35°	1665.3	1666.4	1686.5	1762.9	1806.4
37.5°	1545.5	1537.0	1548.7	1631.4	1660.0
40°	1380.0	1382.1	1370.5	1428.8	1424.5
42.5°	1186.9	1203.9	1143.5	1219.8	1214.5
45°	951.5	1028.9	953.6	1021.5	980.1
47.5°	751.0	865.5	803.0	852.8	775.4
50°	608.9	726.6	692.7	714.9	589.8
52.5°	499.6	595.1	605.7	611.0	460.4
55°	401.0	487.9	521.9	520.8	359.6
57.5°	295.9	396.7	436.0	451.9	272.6
60°	218.5	329.9	359.6	394.6	204.7
62.5°	176.1	289.6	297.0	345.8	155.9
65°	150.6	267.3	240.8	308.7	120.9
67.5°	133.7	249.3	196.2	275.8	102.9
70°	120.9	221.7	162.3	247.1	96.5
72.5°	117.7	188.8	125.2	220.6	95.5
75°	113.5	160.2	90.2	181.4	94.4
77.5°	97.6	136.8	64.7	140.0	88.0
80°	84.9	109.3	47.7	105.0	77.4
82.5°	65.8	82.7	42.4	79.6	62.6
85°	42.4	62.6	44.6	57.3	43.5
87.5°	20.2	35.0	31.8	30.8	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)