

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: P291496

Luminaire Tested: **14GR-LD5-28-A19/156-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291496  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-28-A19/156-UNV-L92765-W2A1-U-4500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2538.0 lumens  
Efficiency: N/A  
Efficacy: 112.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

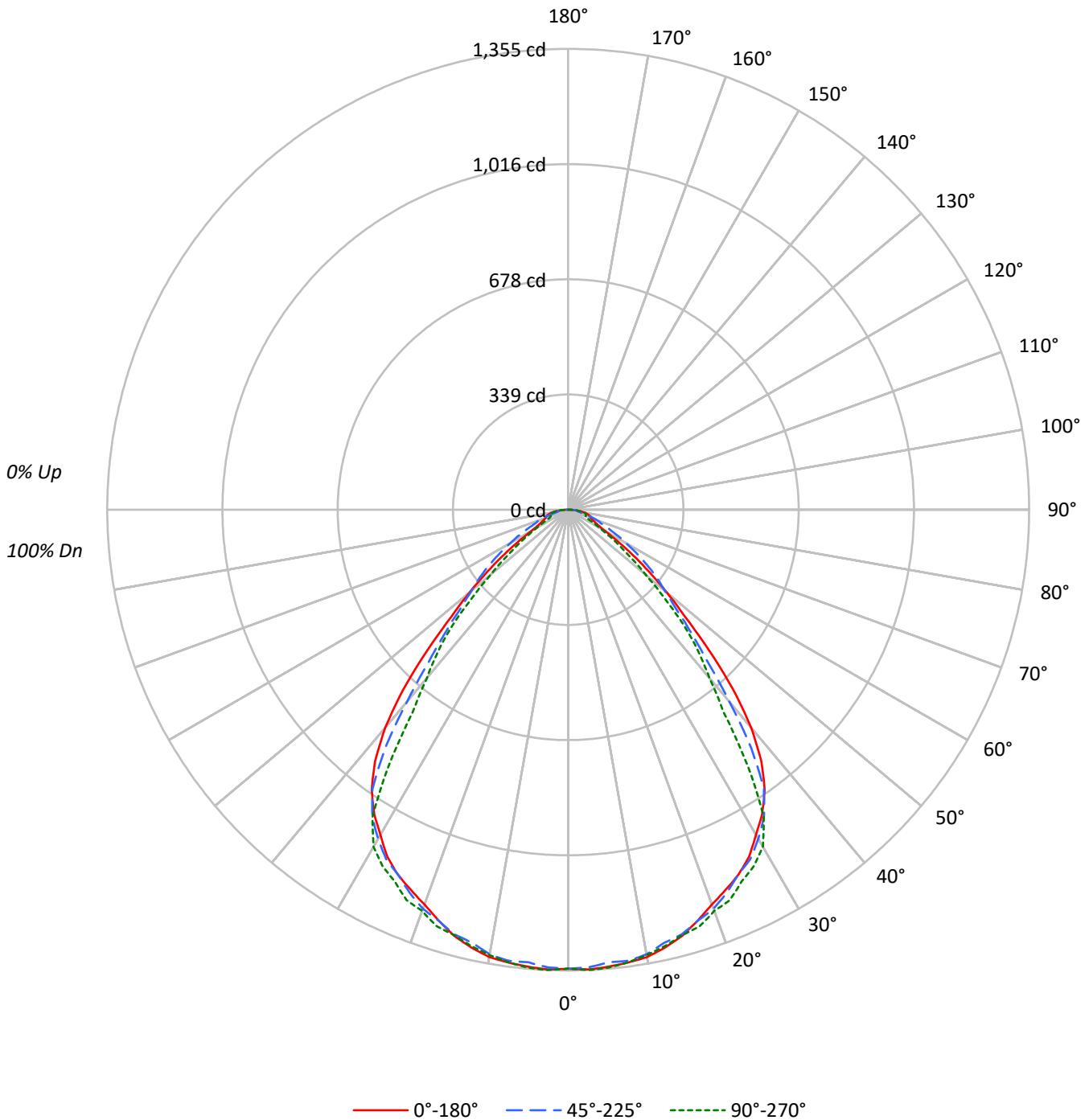
Input Watts (W): 22.599  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90					88				
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79					77				
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70					68				
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63					61				
5	83	71	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56					54				
6	77	65	58	52	75	64	57	52	63	56	51	61	55	51	60	55	51					49				
7	72	60	52	47	70	59	52	47	58	51	46	56	51	46	55	50	46					44				
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42					40				
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38					37				
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35					34				

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

	0°	45°	90°
0°	3632	3632	3632
5°	3644	3609	3652
10°	3650	3627	3634
15°	3612	3600	3608
20°	3537	3575	3595
25°	3515	3514	3581
30°	3430	3471	3556
35°	3307	3294	3027
40°	2937	2592	2269
45°	2229	1939	1835
50°	1581	1552	1245
55°	1082	1325	856
60°	669	1057	572
65°	551	814	415
70°	548	709	425
75°	658	507	568
80°	756	468	711
85°	716	824	806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.0	5.0
10°-20°	365.5	14.4
20°-30°	549.6	21.7
30°-40°	599.2	23.6
40°-50°	419.6	16.5
50°-60°	237.5	9.4
60°-70°	129.9	5.1
70°-80°	78.8	3.1
80°-90°	29.9	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°	1043.2	41.1
0°-40°	1642.4	64.7
0°-60°	2299.4	90.6
0°-90°	2538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2538.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1349	1347	1336	1352	1352	128
15°	1297	1293	1292	1311	1295	365
25°	1184	1186	1184	1211	1206	544
35°	1007	1002	1003	952	921	620
45°	586	611	510	503	482	455
55°	231	276	282	280	182	211
65°	87	142	128	162	65	89
75°	63	91	49	96	55	66
85°	23	38	27	32	26	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1349.6	1349.6	1349.6	1349.6	1349.6
2.5°	1353.1	1351.4	1347.3	1355.4	1354.8
5°	1349.0	1346.7	1336.2	1351.9	1351.9
7.5°	1343.2	1337.4	1338.0	1346.7	1342.6
10°	1335.7	1325.8	1327.5	1329.9	1329.9
12.5°	1318.2	1308.9	1304.3	1311.8	1314.2
15°	1296.7	1293.3	1292.1	1310.7	1295.0
17.5°	1266.5	1274.1	1267.1	1282.2	1284.5
20°	1235.2	1249.7	1248.5	1259.0	1255.5
22.5°	1209.6	1218.9	1218.9	1231.7	1242.1
25°	1184.0	1186.4	1183.5	1210.8	1206.1
27.5°	1150.9	1149.2	1158.5	1172.4	1181.7
30°	1103.9	1104.4	1117.2	1135.8	1144.5
32.5°	1060.9	1055.6	1071.3	1079.5	1070.2
35°	1006.8	1002.2	1002.8	951.6	921.4
37.5°	933.0	937.1	883.7	790.1	750.6
40°	836.0	844.2	737.8	668.1	646.0
42.5°	718.7	721.0	604.8	582.1	567.6
45°	585.6	611.2	509.5	503.1	482.2
47.5°	464.2	511.8	427.0	431.1	381.1
50°	377.6	425.3	370.7	372.4	297.5
52.5°	298.6	345.1	327.1	321.9	233.6
55°	230.6	276.0	282.4	280.0	182.4
57.5°	169.6	218.4	237.0	245.8	140.6
60°	124.3	178.4	196.4	213.8	106.3
62.5°	98.8	154.5	160.9	186.5	82.5
65°	86.6	142.3	127.8	161.5	65.1
67.5°	77.3	135.4	104.0	142.9	56.9
70°	69.7	122.0	90.1	127.8	54.0
72.5°	69.7	106.9	70.9	113.3	54.6
75°	63.3	91.2	48.8	95.9	54.6
77.5°	56.4	77.9	36.6	77.9	51.1
80°	48.8	61.0	30.2	59.8	45.9
82.5°	36.0	45.9	26.1	44.7	37.2
85°	23.2	37.8	26.7	32.5	26.1
87.5°	11.0	19.2	16.8	16.3	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)