

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: P229454

Luminaire Tested: **14RLN-LD5-31-UNV-L830-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229454  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36058)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14RLN-LD5-31-UNV-L830-CD1-U  
Description: METALUX 1X4 RLN LED TROFFER  
Light Source: (112)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3034.0 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.31  
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')  
CIE Type: Direct

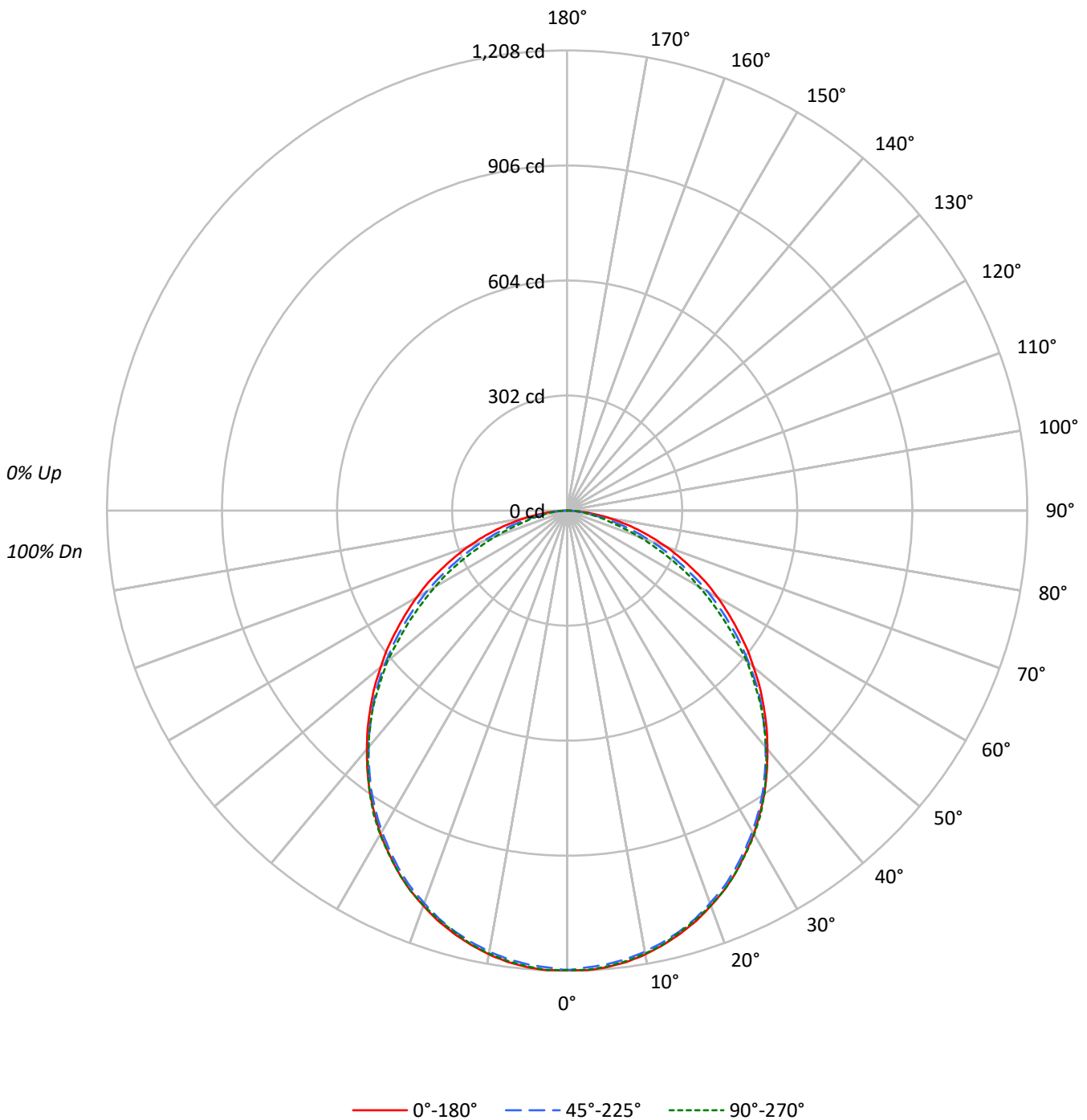
Input Watts (W): 30.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P229454

CATALOG NUMBER: 14RLN-LD5-31-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P229454

CATALOG NUMBER: 14RLN-LD5-31-UNV-L830-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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93		95	92	90		91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77		84	79	76		81	77	74	72
3	91	81	74	67	89	80	73	67	77	71	66		74	69	64		72	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56		66	60	56		64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49		60	53	48		58	52	48	46
6	72	59	50	44	70	58	49	43	56	49	43		54	48	43		53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38		50	43	38		48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34		45	39	34		44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31		42	36	31		41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28		39	33	28		38	32	28	26

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

	0°	45°	90°
0°	4064	4064	4064
5°	4070	4045	4062
10°	4048	4023	4041
15°	4010	3987	3995
20°	3959	3933	3954
25°	3897	3869	3897
30°	3815	3785	3820
35°	3717	3686	3717
40°	3597	3568	3571
45°	3478	3432	3421
50°	3349	3263	3228
55°	3211	3079	2965
60°	3075	2874	2698
65°	2907	2598	2378
70°	2710	2306	1998
75°	2485	1932	1543
80°	2140	1448	1331
85°	1728	1210	1241



TEST NUMBER: P229454

CATALOG NUMBER: 14RLN-LD5-31-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.9	3.8
10°-20°	323.3	10.7
20°-30°	481.2	15.9
30°-40°	562.5	18.5
40°-50°	555.9	18.3
50°-60°	469.4	15.5
60°-70°	325.1	10.7
70°-80°	162.3	5.3
80°-90°	40.3	1.3
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°	918.5	30.3
0°-40°	1481.0	48.8
0°-60°	2506.3	82.6
0°-90°	3034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3034.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1206	1206	1206	1206	1206	
5°	1203	1201	1196	1202	1201	114
15°	1150	1148	1143	1148	1145	324
25°	1048	1045	1041	1047	1048	482
35°	904	899	896	903	904	564
45°	730	722	720	719	718	563
55°	546	537	524	513	505	490
65°	365	347	326	309	298	362
75°	191	174	148	128	118	202
85°	45	34	31	31	32	52
90°	0	0	0	0	0	



TEST NUMBER: P229454

CATALOG NUMBER: 14RLN-LD5-31-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1206.2	1206.2	1206.2	1206.2	1206.2
2.5°	1207.7	1205.5	1200.3	1206.2	1207.0
5°	1203.3	1201.0	1195.8	1201.8	1201.0
7.5°	1195.1	1192.1	1187.6	1192.8	1192.8
10°	1183.1	1180.9	1175.7	1181.6	1180.9
12.5°	1167.5	1166.0	1160.8	1166.7	1166.0
15°	1149.6	1148.1	1142.9	1148.1	1145.1
17.5°	1128.7	1128.0	1122.0	1125.7	1125.0
20°	1104.1	1102.6	1096.7	1104.1	1102.6
22.5°	1078.0	1075.0	1071.3	1077.3	1078.0
25°	1048.2	1045.2	1040.7	1047.4	1048.2
27.5°	1013.9	1011.7	1007.2	1016.9	1015.4
30°	980.4	978.1	972.9	981.1	981.8
32.5°	941.6	939.3	935.6	943.8	945.3
35°	903.6	899.1	896.1	902.8	903.6
37.5°	861.1	856.6	853.6	860.3	858.8
40°	817.8	812.6	811.1	816.3	811.9
42.5°	775.3	768.6	765.6	768.6	765.6
45°	729.9	721.7	720.2	718.7	717.9
47.5°	685.9	676.9	673.2	668.0	664.3
50°	638.9	629.2	622.5	617.3	615.8
52.5°	594.9	583.7	574.0	569.6	557.6
55°	546.5	536.8	524.1	512.9	504.7
57.5°	501.0	488.3	473.4	461.5	451.0
60°	456.3	439.9	426.4	407.8	400.3
62.5°	412.3	393.6	375.0	354.9	351.1
65°	364.6	347.4	325.8	308.6	298.2
67.5°	319.1	301.2	280.3	256.5	246.8
70°	275.1	255.7	234.1	211.0	202.8
72.5°	232.6	213.2	190.9	166.2	156.6
75°	190.9	173.7	148.4	128.2	118.5
77.5°	148.4	134.2	109.6	93.2	91.7
80°	110.3	97.7	74.6	70.8	68.6
82.5°	76.0	64.1	52.9	50.7	49.2
85°	44.7	34.3	31.3	31.3	32.1
87.5°	17.1	14.9	14.9	14.9	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)