

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: P390815

Luminaire Tested: **22CZ2-90VHE-RDP-UNV-L930-CD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P390815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-90VHE-RDP-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5063.5 lumens  
Efficiency: N/A  
Efficacy: 74.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

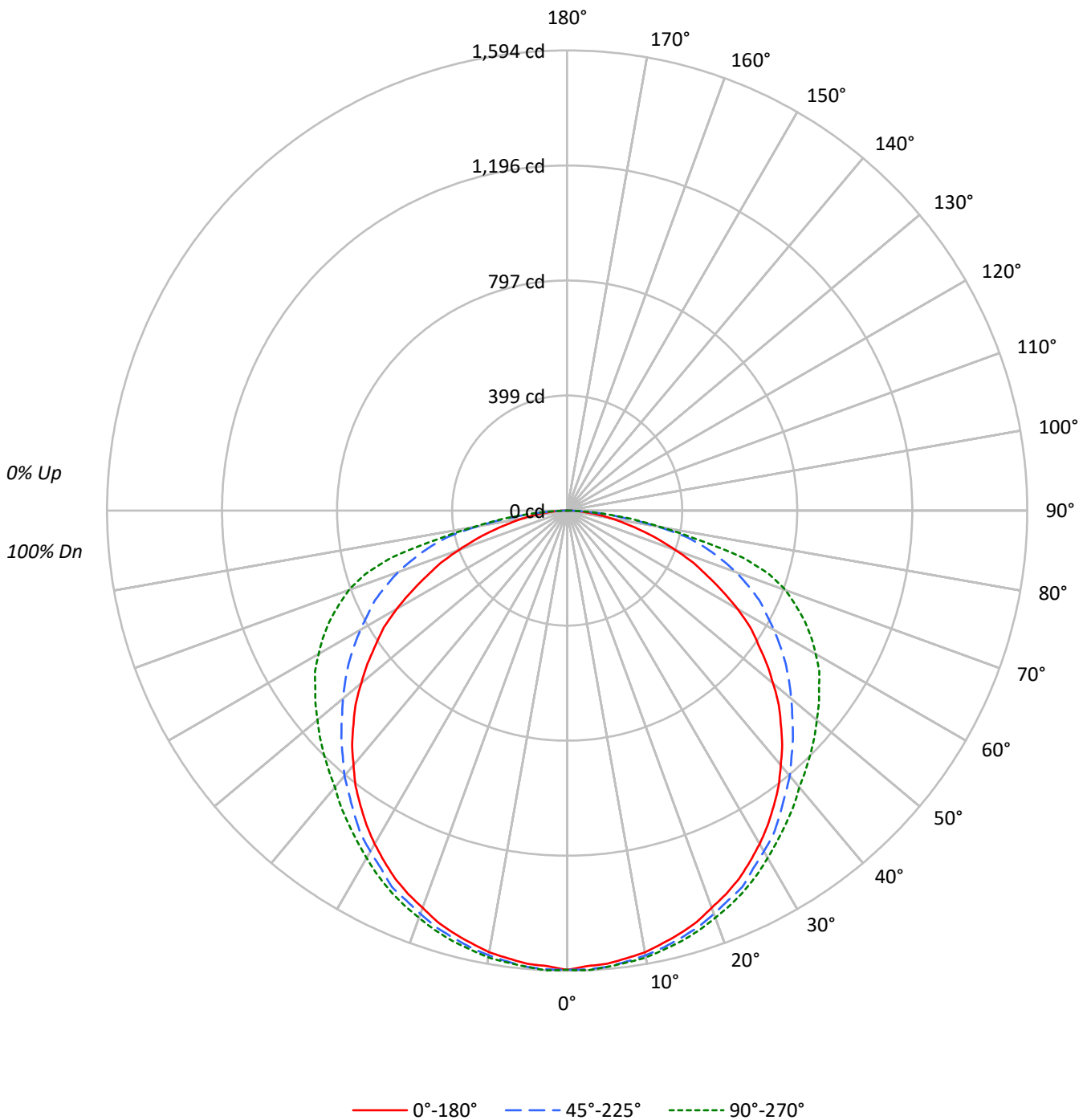
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	4280	4280	4280
5°	4256	4286	4286
10°	4244	4275	4295
15°	4224	4265	4296
20°	4192	4256	4299
25°	4181	4269	4313
30°	4144	4236	4317
35°	4099	4222	4344
40°	4043	4213	4397
45°	3983	4210	4536
50°	3898	4242	4725
55°	3792	4334	4998
60°	3669	4450	5353
65°	3415	4672	5787
70°	3136	4895	6331
75°	2750	5151	6545
80°	2366	4906	5137
85°	2069	3566	3909



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.5	3.0
10°-20°	432.0	8.5
20°-30°	659.1	13.0
30°-40°	804.7	15.9
40°-50°	860.5	17.0
50°-60°	830.5	16.4
60°-70°	714.9	14.1
70°-80°	483.7	9.6
80°-90°	127.6	2.5
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°	1241.5	24.5
0°-40°	2046.3	40.4
0°-60°	3737.3	73.8
0°-90°	5063.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5063.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1576	1579	1587	1587	1587	150
15°	1516	1520	1531	1538	1542	428
25°	1408	1416	1438	1445	1453	648
35°	1248	1259	1285	1311	1322	781
45°	1047	1065	1106	1162	1192	808
55°	808	834	924	1017	1065	724
65°	536	588	734	849	909	533
75°	264	350	495	596	630	284
85°	67	93	116	119	127	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1590.6	1590.6	1590.6	1590.6	1590.6
2.5°	1579.4	1583.1	1590.6	1590.6	1594.3
5°	1575.7	1579.4	1586.8	1586.8	1586.8
7.5°	1564.5	1568.2	1575.7	1579.4	1579.4
10°	1553.3	1557.0	1564.5	1568.2	1571.9
12.5°	1534.7	1538.4	1549.6	1557.0	1557.0
15°	1516.1	1519.8	1531.0	1538.4	1542.1
17.5°	1493.7	1501.2	1512.3	1519.8	1523.5
20°	1463.9	1471.4	1486.3	1497.4	1501.2
22.5°	1437.8	1445.3	1460.2	1471.4	1478.8
25°	1408.0	1415.5	1437.8	1445.3	1452.7
27.5°	1370.8	1378.2	1396.9	1411.8	1422.9
30°	1333.5	1341.0	1363.3	1382.0	1389.4
32.5°	1292.6	1303.7	1329.8	1344.7	1355.9
35°	1247.9	1259.0	1285.1	1311.2	1322.4
37.5°	1203.2	1214.3	1240.4	1273.9	1288.8
40°	1151.0	1165.9	1199.4	1244.1	1251.6
42.5°	1102.6	1121.2	1151.0	1203.2	1221.8
45°	1046.7	1065.3	1106.3	1162.2	1192.0
47.5°	994.6	1013.2	1057.9	1124.9	1162.2
50°	931.2	957.3	1013.2	1091.4	1128.7
52.5°	871.6	894.0	968.5	1054.2	1098.9
55°	808.3	834.4	923.8	1016.9	1065.3
57.5°	752.4	774.8	875.4	979.7	1035.5
60°	681.7	711.5	826.9	938.7	994.6
62.5°	607.2	651.9	778.5	894.0	953.6
65°	536.4	588.5	733.8	849.3	908.9
67.5°	473.1	528.9	677.9	800.9	856.7
70°	398.6	469.3	622.1	741.3	804.6
72.5°	331.5	409.7	558.7	677.9	733.8
75°	264.5	350.1	495.4	596.0	629.5
77.5°	204.9	286.8	424.6	454.4	458.2
80°	152.7	227.2	316.6	320.3	331.5
82.5°	104.3	160.2	204.9	223.5	227.2
85°	67.0	93.1	115.5	119.2	126.6
87.5°	29.8	33.5	41.0	37.2	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)