

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: P390101

Luminaire Tested: **22CZ2-110VHE-RDP-UNV-L940-CD2-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: P390101  
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: 22CZ2-110VHE-RDP-UNV-L940-CD2-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6357.1 lumens  
Efficiency: N/A  
Efficacy: 72.5 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

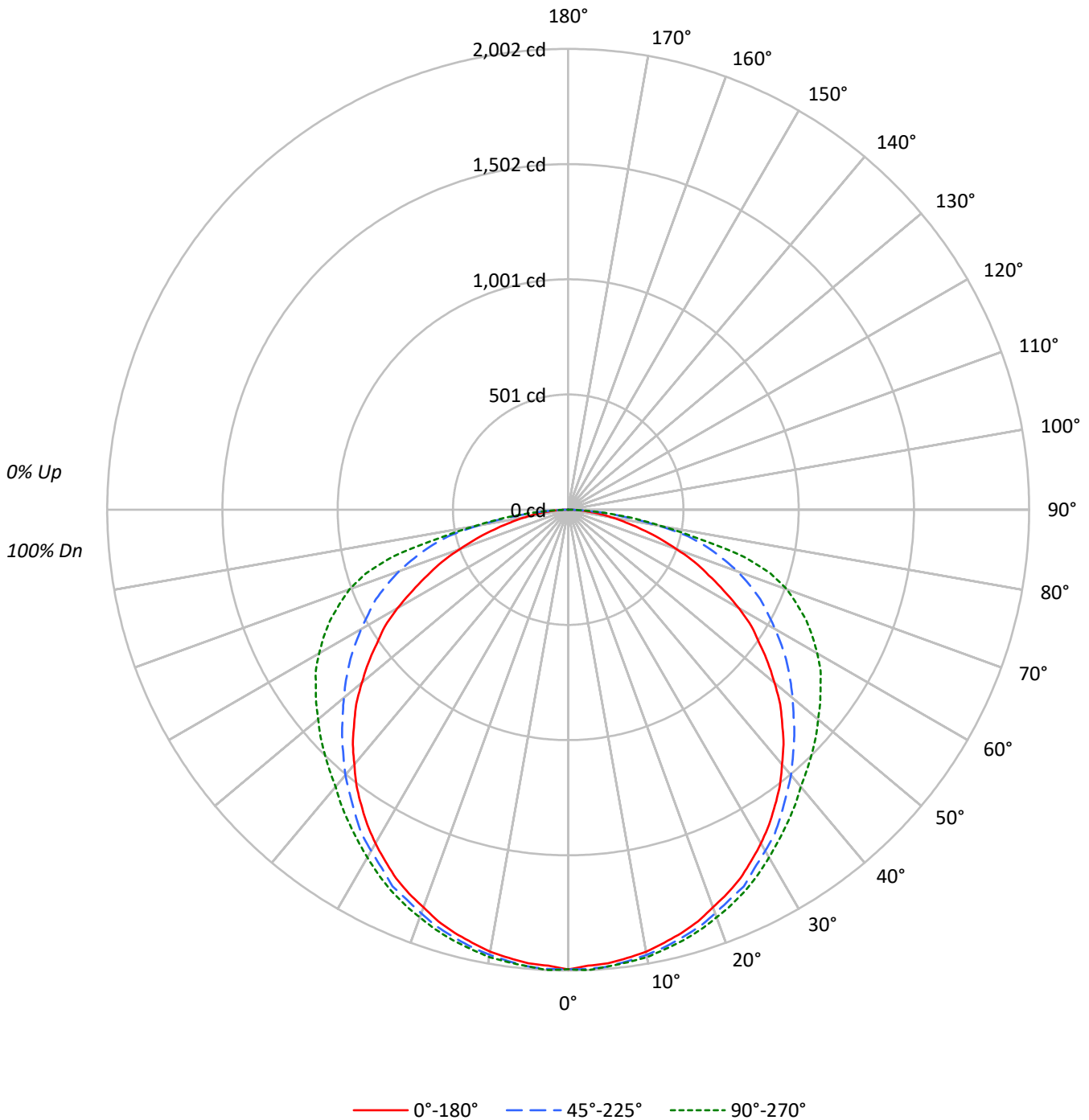
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5374	5374	5374
5°	5344	5381	5381
10°	5329	5367	5393
15°	5302	5355	5394
20°	5263	5343	5397
25°	5249	5360	5415
30°	5202	5318	5420
35°	5146	5300	5454
40°	5076	5290	5520
45°	5001	5286	5695
50°	4894	5325	5932
55°	4761	5441	6275
60°	4606	5588	6720
65°	4288	5866	7266
70°	3937	6145	7947
75°	3452	6467	8217
80°	2971	6160	6450
85°	2600	4477	4909



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.9	3.0
10°-20°	542.3	8.5
20°-30°	827.4	13.0
30°-40°	1010.3	15.9
40°-50°	1080.3	17.0
50°-60°	1042.7	16.4
60°-70°	897.6	14.1
70°-80°	607.3	9.6
80°-90°	160.2	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°	1558.7	24.5
0°-40°	2569.0	40.4
0°-60°	4692.0	73.8
0°-90°	6357.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6357.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1997	1997	1997	1997	1997	
5°	1978	1983	1992	1992	1992	188
15°	1903	1908	1922	1931	1936	537
25°	1768	1777	1805	1814	1824	814
35°	1567	1581	1613	1646	1660	980
45°	1314	1338	1389	1459	1496	1014
55°	1015	1048	1160	1277	1338	909
65°	673	739	921	1066	1141	670
75°	332	440	622	748	790	356
85°	84	117	145	150	159	95
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1996.9	1996.9	1996.9	1996.9	1996.9
2.5°	1982.8	1987.5	1996.9	1996.9	2001.6
5°	1978.2	1982.8	1992.2	1992.2	1992.2
7.5°	1964.1	1968.8	1978.2	1982.8	1982.8
10°	1950.1	1954.8	1964.1	1968.8	1973.5
12.5°	1926.7	1931.4	1945.4	1954.8	1954.8
15°	1903.3	1908.0	1922.1	1931.4	1936.1
17.5°	1875.3	1884.6	1898.7	1908.0	1912.7
20°	1837.9	1847.2	1865.9	1880.0	1884.6
22.5°	1805.1	1814.5	1833.2	1847.2	1856.6
25°	1767.7	1777.1	1805.1	1814.5	1823.8
27.5°	1721.0	1730.3	1753.7	1772.4	1786.4
30°	1674.2	1683.5	1711.6	1735.0	1744.3
32.5°	1622.8	1636.8	1669.5	1688.2	1702.3
35°	1566.6	1580.7	1613.4	1646.1	1660.2
37.5°	1510.5	1524.5	1557.3	1599.4	1618.1
40°	1445.0	1463.8	1505.8	1562.0	1571.3
42.5°	1384.3	1407.6	1445.0	1510.5	1533.9
45°	1314.1	1337.5	1388.9	1459.1	1496.5
47.5°	1248.6	1272.0	1328.1	1412.3	1459.1
50°	1169.1	1201.9	1272.0	1370.2	1417.0
52.5°	1094.3	1122.4	1215.9	1323.5	1379.6
55°	1014.8	1047.5	1159.8	1276.7	1337.5
57.5°	944.7	972.7	1099.0	1229.9	1300.1
60°	855.8	893.2	1038.2	1178.5	1248.6
62.5°	762.3	818.4	977.4	1122.4	1197.2
65°	673.4	738.9	921.3	1066.2	1141.1
67.5°	593.9	664.1	851.1	1005.5	1075.6
70°	500.4	589.2	781.0	930.6	1010.1
72.5°	416.2	514.4	701.5	851.1	921.3
75°	332.0	439.6	622.0	748.2	790.3
77.5°	257.2	360.1	533.1	570.5	575.2
80°	191.7	285.3	397.5	402.2	416.2
82.5°	130.9	201.1	257.2	280.6	285.3
85°	84.2	116.9	145.0	149.6	159.0
87.5°	37.4	42.1	51.4	46.8	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)