

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: P391636

Luminaire Tested: **24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-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: P391636  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-U  
Description: 2x4 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: 4005.2 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

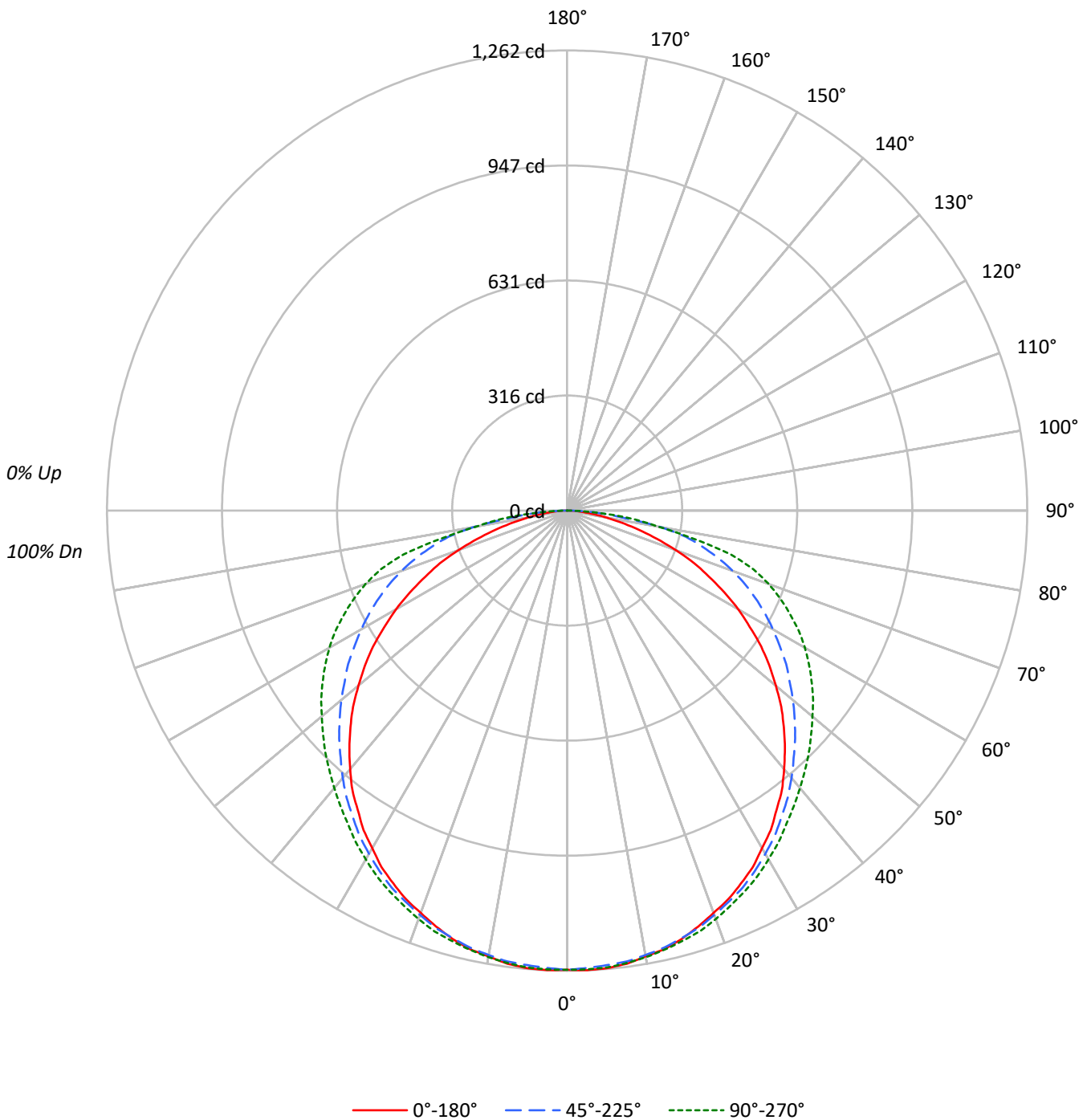
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P391636

CATALOG NUMBER: 24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P391636

CATALOG NUMBER: 24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1695	1695	1695
5°	1701	1690	1698
10°	1696	1691	1699
15°	1694	1691	1702
20°	1681	1690	1707
25°	1675	1693	1711
30°	1661	1688	1716
35°	1645	1684	1723
40°	1626	1682	1745
45°	1599	1682	1784
50°	1564	1693	1838
55°	1524	1720	1920
60°	1459	1753	2026
65°	1366	1815	2151
70°	1243	1899	2313
75°	1053	2004	2417
80°	831	2016	1955
85°	613	1533	1718



TEST NUMBER: P391636

CATALOG NUMBER: 24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.5	3.0
10°-20°	343.9	8.6
20°-30°	525.8	13.1
30°-40°	642.8	16.0
40°-50°	685.1	17.1
50°-60°	655.0	16.4
60°-70°	554.9	13.9
70°-80°	373.0	9.3
80°-90°	105.2	2.6
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°	989.2	24.7
0°-40°	1632.0	40.7
0°-60°	2972.1	74.2
0°-90°	4005.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4005.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1260	1258	1252	1258	1258	120
15°	1216	1216	1214	1224	1222	343
25°	1128	1132	1140	1150	1152	520
35°	1001	1009	1025	1045	1049	627
45°	840	854	884	922	938	648
55°	650	674	733	791	818	579
65°	429	473	570	646	676	426
75°	203	276	385	451	465	217
85°	40	82	99	107	111	49
90°	0	0	0	0	0	



TEST NUMBER: P391636

CATALOG NUMBER: 24CZ2-70VHE-RDP-UNV-L940-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1259.5	1259.5	1259.5	1259.5	1259.5
2.5°	1261.5	1261.5	1255.5	1259.5	1259.5
5°	1259.5	1257.5	1251.6	1257.5	1257.5
7.5°	1253.6	1251.6	1247.6	1253.6	1251.6
10°	1241.6	1241.6	1237.7	1243.6	1243.6
12.5°	1231.7	1229.7	1227.7	1235.7	1233.7
15°	1215.8	1215.8	1213.8	1223.8	1221.8
17.5°	1195.9	1197.9	1199.9	1207.9	1209.9
20°	1174.1	1178.1	1180.1	1192.0	1192.0
22.5°	1154.2	1156.2	1160.2	1172.1	1172.1
25°	1128.4	1132.4	1140.3	1150.3	1152.2
27.5°	1102.6	1104.6	1114.5	1128.4	1130.4
30°	1068.8	1074.8	1086.7	1102.6	1104.6
32.5°	1039.0	1045.0	1058.9	1074.8	1078.7
35°	1001.3	1009.2	1025.1	1045.0	1048.9
37.5°	967.5	973.4	993.3	1015.2	1021.1
40°	925.8	937.7	957.6	983.4	993.3
42.5°	884.0	896.0	919.8	953.6	965.5
45°	840.3	854.2	884.0	921.8	937.7
47.5°	796.6	812.5	846.3	890.0	907.9
50°	747.0	766.8	808.6	858.2	878.1
52.5°	699.3	723.1	768.8	824.4	850.3
55°	649.6	673.5	733.1	790.7	818.5
57.5°	594.0	625.8	691.3	756.9	786.7
60°	542.3	572.1	651.6	723.1	752.9
62.5°	486.7	526.5	611.9	687.4	717.2
65°	429.1	472.8	570.2	645.7	675.5
67.5°	377.5	425.1	528.4	603.9	633.7
70°	315.9	375.5	482.8	558.2	588.0
72.5°	258.3	323.8	435.1	508.6	536.4
75°	202.6	276.1	385.4	451.0	464.9
77.5°	151.0	228.5	333.8	361.6	351.6
80°	107.3	182.8	260.2	246.3	252.3
82.5°	69.5	139.1	160.9	182.8	188.7
85°	39.7	81.5	99.3	107.3	111.3
87.5°	17.9	29.8	39.7	39.7	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)