

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: P391637

Luminaire Tested: **24CZ2-70VHE-RDP-UNV-L940-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: P391637  
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-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: 4055.6 lumens  
Efficiency: N/A  
Efficacy: 88.7 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

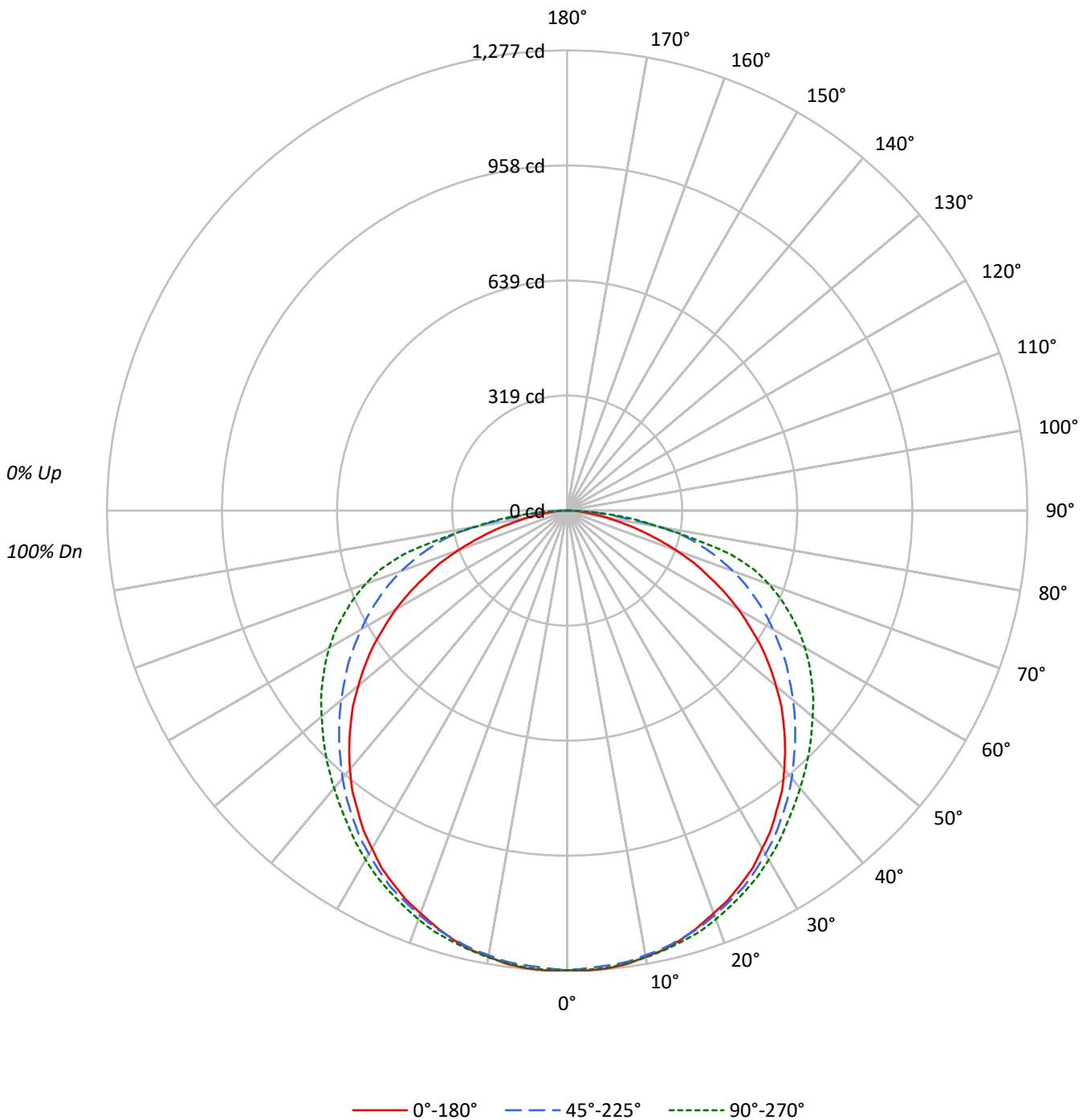
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P391637

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

### Luminous Intensity Polar Plot





TEST NUMBER: P391637

CATALOG NUMBER: 24CZ2-70VHE-RDP-UNV-L940-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	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	68	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°	1716	1716	1716
5°	1723	1712	1720
10°	1718	1712	1721
15°	1715	1712	1723
20°	1702	1711	1728
25°	1696	1714	1732
30°	1682	1710	1738
35°	1665	1705	1745
40°	1646	1703	1767
45°	1619	1703	1807
50°	1583	1714	1861
55°	1543	1741	1944
60°	1478	1776	2052
65°	1383	1838	2178
70°	1258	1923	2342
75°	1067	2029	2447
80°	841	2042	1980
85°	621	1553	1740



TEST NUMBER: P391637

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.0	3.0
10°-20°	348.2	8.6
20°-30°	532.4	13.1
30°-40°	650.9	16.0
40°-50°	693.7	17.1
50°-60°	663.3	16.4
60°-70°	561.9	13.9
70°-80°	377.6	9.3
80°-90°	106.5	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°	1001.6	24.7
0°-40°	1652.5	40.7
0°-60°	3009.5	74.2
0°-90°	4055.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4055.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1275	1275	1275	1275	1275	
5°	1275	1273	1267	1273	1273	121
15°	1231	1231	1229	1239	1237	347
25°	1143	1147	1155	1165	1167	527
35°	1014	1022	1038	1058	1062	635
45°	851	865	895	933	950	656
55°	658	682	742	801	829	586
65°	434	479	577	654	684	431
75°	205	280	390	457	471	220
85°	40	82	101	109	113	50
90°	0	0	0	0	0	



TEST NUMBER: P391637

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1277.4	1277.4	1271.3	1275.4	1275.4
5°	1275.4	1273.4	1267.3	1273.4	1273.4
7.5°	1269.3	1267.3	1263.3	1269.3	1267.3
10°	1257.3	1257.3	1253.2	1259.3	1259.3
12.5°	1247.2	1245.2	1243.2	1251.2	1249.2
15°	1231.1	1231.1	1229.1	1239.2	1237.1
17.5°	1211.0	1213.0	1215.0	1223.1	1225.1
20°	1188.9	1192.9	1194.9	1207.0	1207.0
22.5°	1168.8	1170.8	1174.8	1186.9	1186.9
25°	1142.6	1146.6	1154.7	1164.7	1166.7
27.5°	1116.5	1118.5	1128.5	1142.6	1144.6
30°	1082.3	1088.3	1100.4	1116.5	1118.5
32.5°	1052.1	1058.1	1072.2	1088.3	1092.3
35°	1013.9	1021.9	1038.0	1058.1	1062.1
37.5°	979.7	985.7	1005.8	1027.9	1034.0
40°	937.4	949.5	969.6	995.8	1005.8
42.5°	895.2	907.2	931.4	965.6	977.6
45°	850.9	865.0	895.2	933.4	949.5
47.5°	806.7	822.8	857.0	901.2	919.3
50°	756.4	776.5	818.7	869.0	889.1
52.5°	708.1	732.2	778.5	834.8	861.0
55°	657.8	681.9	742.3	800.6	828.8
57.5°	601.5	633.7	700.0	766.4	796.6
60°	549.2	579.3	659.8	732.2	762.4
62.5°	492.8	533.1	619.6	696.0	726.2
65°	434.5	478.8	577.3	653.8	684.0
67.5°	382.2	430.5	535.1	611.5	641.7
70°	319.8	380.2	488.8	565.3	595.4
72.5°	261.5	327.9	440.5	515.0	543.1
75°	205.2	279.6	390.3	456.6	470.7
77.5°	152.9	231.3	338.0	366.1	356.1
80°	108.6	185.1	263.5	249.4	255.5
82.5°	70.4	140.8	162.9	185.1	191.1
85°	40.2	82.5	100.6	108.6	112.7
87.5°	18.1	30.2	40.2	40.2	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)