

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: P388063

Luminaire Tested: **22CZ2-50VHE-SQR-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: P388063  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4128.0 lumens  
Efficiency: N/A  
Efficacy: 114.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

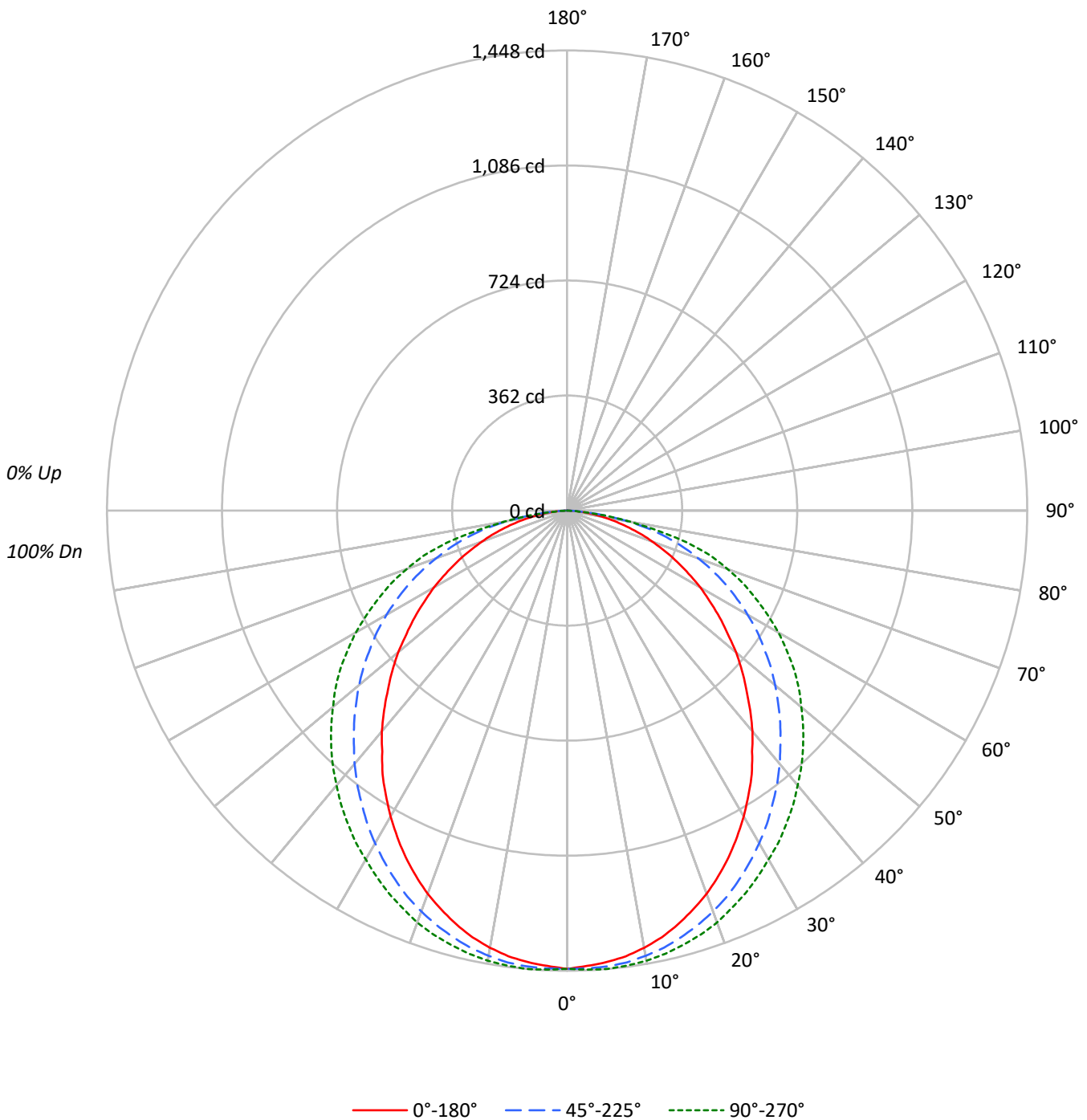
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388063

CATALOG NUMBER: 22CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388063

CATALOG NUMBER: 22CZ2-50VHE-SQR-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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	3880	3880	3880
5°	3853	3890	3911
10°	3817	3887	3930
15°	3755	3870	3941
20°	3675	3843	3950
25°	3572	3805	3944
30°	3452	3756	3939
35°	3327	3701	3952
40°	3186	3655	3964
45°	3035	3609	3997
50°	2904	3576	4027
55°	2748	3548	4091
60°	2604	3532	4133
65°	2433	3505	4167
70°	2235	3453	4223
75°	2017	3361	4075
80°	1731	2975	3067
85°	1392	1754	1392



TEST NUMBER: P388063

CATALOG NUMBER: 22CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.7	3.3
10°-20°	390.9	9.5
20°-30°	587.0	14.2
30°-40°	700.1	17.0
40°-50°	723.9	17.5
50°-60°	665.5	16.1
60°-70°	529.8	12.8
70°-80°	323.7	7.8
80°-90°	70.4	1.7
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°	1114.6	27.0
0°-40°	1814.7	44.0
0°-60°	3204.1	77.6
0°-90°	4128.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4128.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1442	1442	1442	1442	1442	
5°	1426	1430	1440	1446	1448	135
15°	1348	1364	1389	1409	1415	380
25°	1203	1232	1281	1317	1328	553
35°	1013	1056	1127	1185	1203	632
45°	797	854	948	1025	1050	617
55°	586	650	756	842	872	524
65°	382	447	550	627	654	378
75°	194	251	323	380	392	207
85°	45	55	57	49	45	52
90°	0	0	0	0	0	



TEST NUMBER: P388063

CATALOG NUMBER: 22CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1442.0	1442.0	1442.0	1442.0	1442.0
2.5°	1434.2	1436.1	1442.0	1445.9	1445.9
5°	1426.3	1430.3	1440.1	1445.9	1447.9
7.5°	1414.6	1420.5	1434.2	1442.0	1444.0
10°	1396.9	1404.8	1422.4	1434.2	1438.1
12.5°	1375.4	1387.2	1408.7	1424.4	1428.3
15°	1348.0	1363.6	1389.1	1408.7	1414.6
17.5°	1316.6	1336.2	1367.6	1391.1	1398.9
20°	1283.3	1302.9	1342.1	1369.5	1379.3
22.5°	1244.1	1269.6	1314.7	1346.0	1353.8
25°	1203.0	1232.4	1281.4	1316.6	1328.4
27.5°	1157.9	1193.2	1246.1	1289.2	1299.0
30°	1110.9	1148.1	1208.9	1255.9	1267.6
32.5°	1061.9	1105.0	1169.7	1222.6	1238.2
35°	1012.9	1056.0	1126.6	1185.3	1203.0
37.5°	956.1	1007.1	1085.4	1146.2	1167.7
40°	907.1	956.1	1040.4	1107.0	1128.5
42.5°	852.3	905.2	993.3	1065.8	1091.3
45°	797.4	854.2	948.3	1024.7	1050.2
47.5°	746.5	803.3	901.3	981.6	1007.1
50°	693.6	752.4	854.2	936.5	962.0
52.5°	636.8	701.4	807.2	889.5	918.9
55°	585.8	650.5	756.3	842.5	871.9
57.5°	532.9	599.5	709.2	791.5	819.0
60°	483.9	548.6	656.3	736.7	768.0
62.5°	431.0	497.7	603.4	681.8	711.2
65°	382.1	446.7	550.5	627.0	654.4
67.5°	333.1	397.7	495.7	568.2	599.5
70°	284.1	348.7	438.9	509.4	536.8
72.5°	241.0	297.8	384.0	448.7	474.1
75°	194.0	250.8	323.3	380.1	391.9
77.5°	150.9	201.8	262.5	288.0	291.9
80°	111.7	150.9	192.0	197.9	197.9
82.5°	74.5	103.8	119.5	121.5	119.5
85°	45.1	54.9	56.8	49.0	45.1
87.5°	15.7	15.7	9.8	5.9	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)