

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: P388203

Luminaire Tested: **22CZ2-20VHE-UNV-L940-CD1-SDWPD1-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: P388203  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20VHE-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

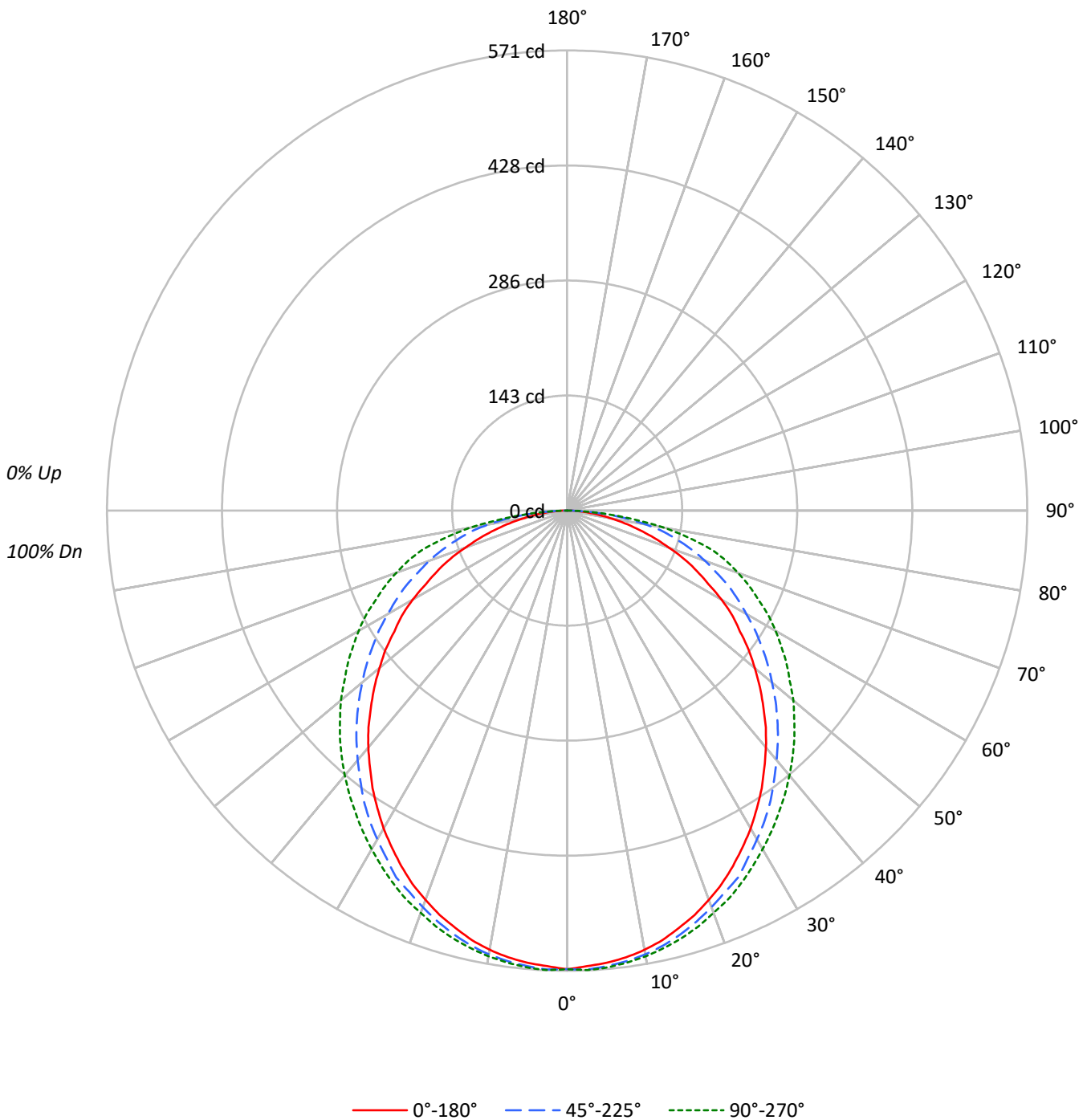
Lumens per Lamp: N/A  
Luminaire Lumens: 1673.6 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	1531	1531	1531
5°	1522	1533	1537
10°	1512	1528	1535
15°	1494	1516	1530
20°	1472	1500	1521
25°	1445	1491	1516
30°	1415	1464	1507
35°	1382	1445	1504
40°	1348	1421	1507
45°	1310	1404	1517
50°	1272	1389	1534
55°	1229	1383	1561
60°	1192	1383	1609
65°	1133	1405	1668
70°	1056	1432	1775
75°	968	1482	1918
80°	843	1543	1889
85°	738	1374	1501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	3.2
10°-20°	153.3	9.2
20°-30°	230.1	13.7
30°-40°	275.0	16.4
40°-50°	285.9	17.1
50°-60°	265.0	15.8
60°-70°	217.4	13.0
70°-80°	146.9	8.8
80°-90°	46.2	2.8
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°	437.2	26.1
0°-40°	712.2	42.6
0°-60°	1263.1	75.5
0°-90°	1673.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1673.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	569	569	569	569	569	
5°	563	564	567	568	569	53
15°	536	539	544	548	549	151
25°	487	491	502	508	511	224
35°	421	427	440	453	458	263
45°	344	351	369	390	399	266
55°	262	270	295	321	333	235
65°	178	188	221	250	262	176
75°	93	109	142	171	184	99
85°	24	33	44	49	49	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	569.1	569.1	569.1	569.1	569.1
2.5°	565.8	567.4	569.9	570.7	570.7
5°	563.3	564.1	567.4	568.2	569.1
7.5°	559.2	560.8	564.1	564.9	565.8
10°	553.4	555.1	559.2	560.8	561.6
12.5°	546.0	547.6	552.6	555.1	555.9
15°	536.1	538.6	544.3	547.6	549.3
17.5°	526.2	528.7	534.5	539.4	541.1
20°	513.9	519.6	523.8	530.3	531.2
22.5°	501.5	504.8	512.2	518.8	522.1
25°	486.7	490.8	502.3	508.1	510.6
27.5°	471.1	476.8	485.9	494.9	498.2
30°	455.4	459.5	471.1	481.8	485.1
32.5°	438.1	443.9	456.2	466.9	471.9
35°	420.8	426.6	439.8	452.9	457.9
37.5°	401.9	408.5	421.6	437.3	443.9
40°	383.8	388.7	404.4	423.3	429.1
42.5°	364.8	370.6	387.1	407.6	414.2
45°	344.2	350.8	368.9	390.4	398.6
47.5°	324.5	331.1	350.8	372.2	382.1
50°	303.9	312.1	331.9	356.6	366.5
52.5°	284.1	291.5	313.8	339.3	348.4
55°	261.9	270.1	294.8	321.2	332.7
57.5°	243.8	249.5	276.7	303.9	315.4
60°	221.5	228.9	256.9	285.8	298.9
62.5°	197.6	210.0	238.8	268.5	281.6
65°	177.9	187.8	220.7	249.5	261.9
67.5°	157.3	168.0	200.1	230.6	244.6
70°	134.2	148.2	182.0	212.5	225.6
72.5°	113.6	128.5	163.1	192.7	206.7
75°	93.1	108.7	142.5	171.3	184.5
77.5°	73.3	90.6	123.5	145.8	154.0
80°	54.4	70.8	99.6	115.3	121.9
82.5°	37.9	51.9	73.3	81.5	83.2
85°	23.9	32.9	44.5	49.4	48.6
87.5°	10.7	13.2	16.5	18.1	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)