

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: P390141

Luminaire Tested: **22CZ2-20VHE-RDP-UNV-L930-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: P390141  
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: 22CZ2-20VHE-RDP-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1087.2 lumens  
Efficiency: N/A  
Efficacy: 76.6 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

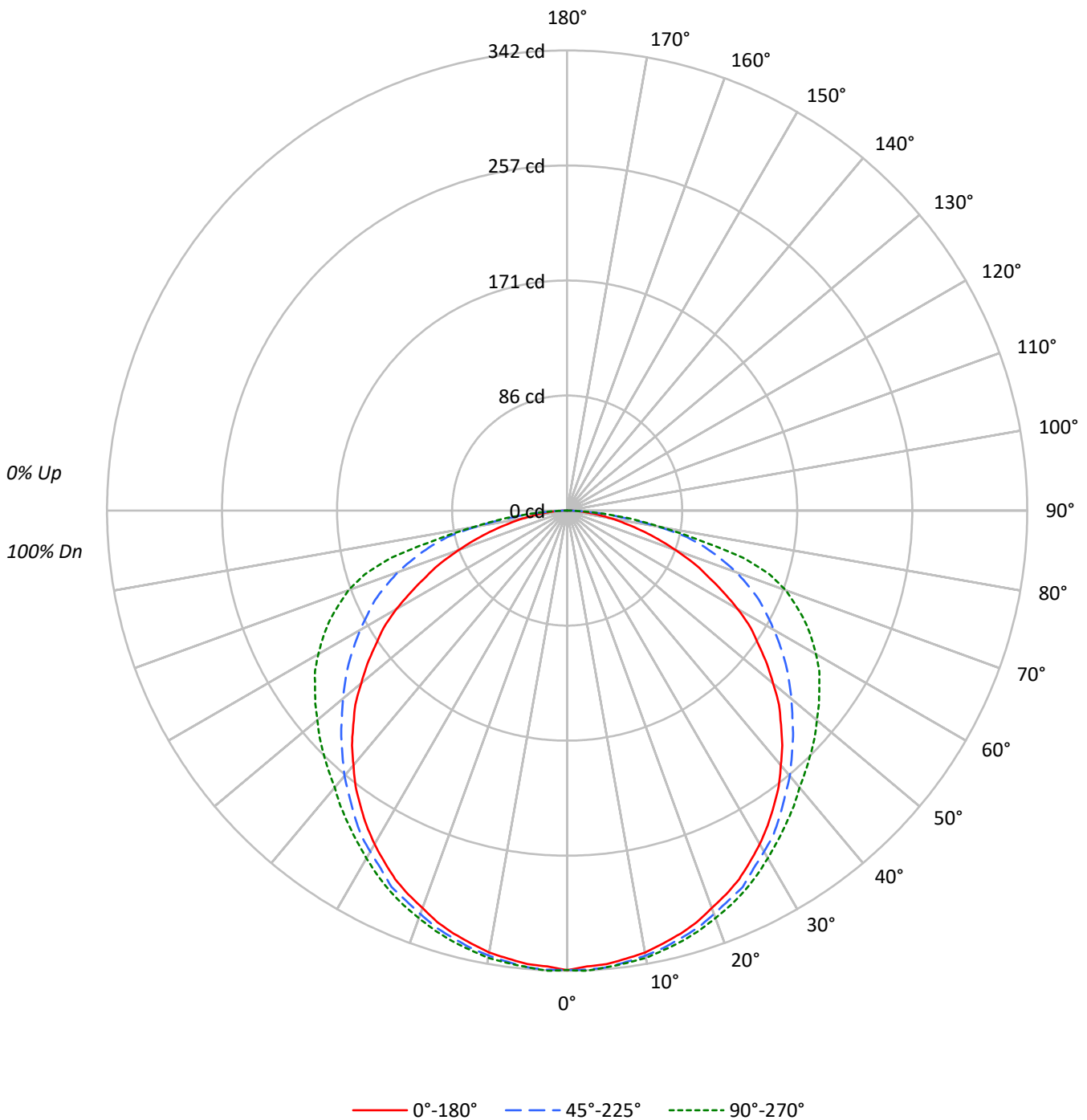
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390141

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390141

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L930-CD1-SDWPD1-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	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°	919	919	919
5°	914	920	920
10°	911	918	922
15°	907	916	922
20°	900	914	923
25°	898	917	926
30°	890	909	927
35°	880	906	933
40°	868	905	944
45°	855	904	974
50°	837	911	1014
55°	814	930	1073
60°	788	956	1149
65°	734	1004	1242
70°	673	1051	1360
75°	591	1106	1406
80°	508	1054	1103
85°	445	766	840



TEST NUMBER: P390141

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.3	3.0
10°-20°	92.7	8.5
20°-30°	141.5	13.0
30°-40°	172.8	15.9
40°-50°	184.7	17.0
50°-60°	178.3	16.4
60°-70°	153.5	14.1
70°-80°	103.9	9.6
80°-90°	27.4	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°	266.6	24.5
0°-40°	439.3	40.4
0°-60°	802.4	73.8
0°-90°	1087.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1087.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	342	342	342	342	342	
5°	338	339	341	341	341	32
15°	326	326	329	330	331	92
25°	302	304	309	310	312	139
35°	268	270	276	282	284	168
45°	225	229	238	250	256	173
55°	174	179	198	218	229	156
65°	115	126	158	182	195	115
75°	57	75	106	128	135	61
85°	14	20	25	26	27	16
90°	0	0	0	0	0	



TEST NUMBER: P390141

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	341.5	341.5	341.5	341.5	341.5
2.5°	339.1	339.9	341.5	341.5	342.3
5°	338.3	339.1	340.7	340.7	340.7
7.5°	335.9	336.7	338.3	339.1	339.1
10°	333.5	334.3	335.9	336.7	337.5
12.5°	329.5	330.3	332.7	334.3	334.3
15°	325.5	326.3	328.7	330.3	331.1
17.5°	320.7	322.3	324.7	326.3	327.1
20°	314.3	315.9	319.1	321.5	322.3
22.5°	308.7	310.3	313.5	315.9	317.5
25°	302.3	303.9	308.7	310.3	311.9
27.5°	294.3	295.9	299.9	303.1	305.5
30°	286.3	287.9	292.7	296.7	298.3
32.5°	277.5	279.9	285.5	288.7	291.1
35°	267.9	270.3	275.9	281.5	283.9
37.5°	258.3	260.7	266.3	273.5	276.7
40°	247.1	250.3	257.5	267.1	268.7
42.5°	236.7	240.7	247.1	258.3	262.3
45°	224.7	228.7	237.5	249.5	255.9
47.5°	213.5	217.5	227.1	241.5	249.5
50°	199.9	205.5	217.5	234.3	242.3
52.5°	187.1	191.9	207.9	226.3	235.9
55°	173.6	179.2	198.3	218.3	228.7
57.5°	161.6	166.4	187.9	210.3	222.3
60°	146.4	152.8	177.6	201.5	213.5
62.5°	130.4	140.0	167.2	191.9	204.7
65°	115.2	126.4	157.6	182.4	195.1
67.5°	101.6	113.6	145.6	172.0	184.0
70°	85.6	100.8	133.6	159.2	172.8
72.5°	71.2	88.0	120.0	145.6	157.6
75°	56.8	75.2	106.4	128.0	135.2
77.5°	44.0	61.6	91.2	97.6	98.4
80°	32.8	48.8	68.0	68.8	71.2
82.5°	22.4	34.4	44.0	48.0	48.8
85°	14.4	20.0	24.8	25.6	27.2
87.5°	6.4	7.2	8.8	8.0	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)