

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: P390529

Luminaire Tested: **22CZ2-60VHE-RDP-UNV-L935-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: P390529  
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: 22CZ2-60VHE-RDP-UNV-L935-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3431.3 lumens  
Efficiency: N/A  
Efficacy: 77.8 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

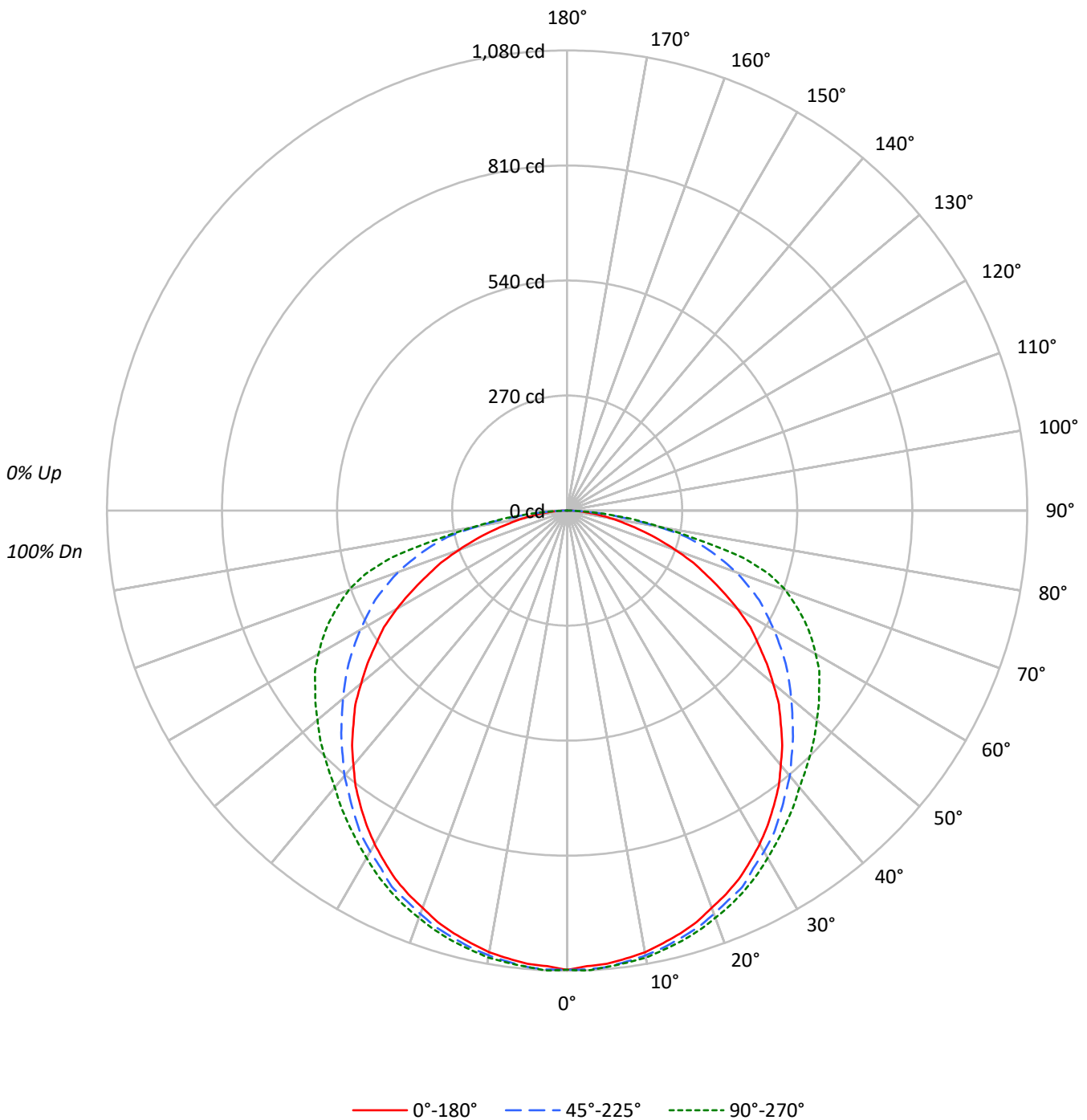
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390529

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L935-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390529

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L935-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	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°	2900	2900	2900
5°	2884	2905	2905
10°	2876	2897	2911
15°	2862	2890	2911
20°	2841	2884	2913
25°	2833	2893	2923
30°	2808	2871	2925
35°	2778	2861	2944
40°	2740	2855	2979
45°	2699	2853	3074
50°	2642	2874	3202
55°	2570	2937	3387
60°	2486	3016	3627
65°	2315	3167	3922
70°	2125	3316	4290
75°	1863	3490	4435
80°	1604	3326	3482
85°	1402	2418	2649



TEST NUMBER: P390529

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L935-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.0	3.0
10°-20°	292.7	8.5
20°-30°	446.6	13.0
30°-40°	545.3	15.9
40°-50°	583.1	17.0
50°-60°	562.8	16.4
60°-70°	484.5	14.1
70°-80°	327.8	9.6
80°-90°	86.5	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°	841.3	24.5
0°-40°	1386.7	40.4
0°-60°	2532.5	73.8
0°-90°	3431.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3431.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1078	1078	1078	1078	1078	
5°	1068	1070	1075	1075	1075	101
15°	1027	1030	1037	1042	1045	290
25°	954	959	974	979	984	439
35°	846	853	871	888	896	529
45°	709	722	750	788	808	548
55°	548	565	626	689	722	491
65°	364	399	497	576	616	361
75°	179	237	336	404	427	192
85°	45	63	78	81	86	51
90°	0	0	0	0	0	



TEST NUMBER: P390529

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L935-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1077.8	1077.8	1077.8	1077.8	1077.8
2.5°	1070.3	1072.8	1077.8	1077.8	1080.4
5°	1067.7	1070.3	1075.3	1075.3	1075.3
7.5°	1060.2	1062.7	1067.7	1070.3	1070.3
10°	1052.6	1055.1	1060.2	1062.7	1065.2
12.5°	1040.0	1042.5	1050.1	1055.1	1055.1
15°	1027.3	1029.9	1037.4	1042.5	1045.0
17.5°	1012.2	1017.3	1024.8	1029.9	1032.4
20°	992.0	997.1	1007.2	1014.7	1017.3
22.5°	974.3	979.4	989.5	997.1	1002.1
25°	954.1	959.2	974.3	979.4	984.4
27.5°	928.9	934.0	946.6	956.7	964.2
30°	903.7	908.7	923.9	936.5	941.5
32.5°	875.9	883.5	901.1	911.2	918.8
35°	845.6	853.2	870.8	888.5	896.1
37.5°	815.3	822.9	840.6	863.3	873.4
40°	780.0	790.1	812.8	843.1	848.1
42.5°	747.2	759.8	780.0	815.3	827.9
45°	709.3	721.9	749.7	787.5	807.7
47.5°	674.0	686.6	716.9	762.3	787.5
50°	631.0	648.7	686.6	739.6	764.8
52.5°	590.7	605.8	656.3	714.3	744.6
55°	547.8	565.4	626.0	689.1	721.9
57.5°	509.9	525.0	593.2	663.9	701.7
60°	461.9	482.1	560.4	636.1	674.0
62.5°	411.4	441.7	527.6	605.8	646.2
65°	363.5	398.8	497.3	575.5	615.9
67.5°	320.6	358.4	459.4	542.7	580.6
70°	270.1	318.0	421.5	502.3	545.2
72.5°	224.7	277.7	378.6	459.4	497.3
75°	179.2	237.3	335.7	403.9	426.6
77.5°	138.8	194.4	287.8	308.0	310.5
80°	103.5	154.0	214.6	217.1	224.7
82.5°	70.7	108.5	138.8	151.5	154.0
85°	45.4	63.1	78.3	80.8	85.8
87.5°	20.2	22.7	27.8	25.2	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)