

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: P388630

Luminaire Tested: **24CZ2-120VHE-UNV-L930-CD2-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: P388630  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-120VHE-UNV-L930-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9950.0 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

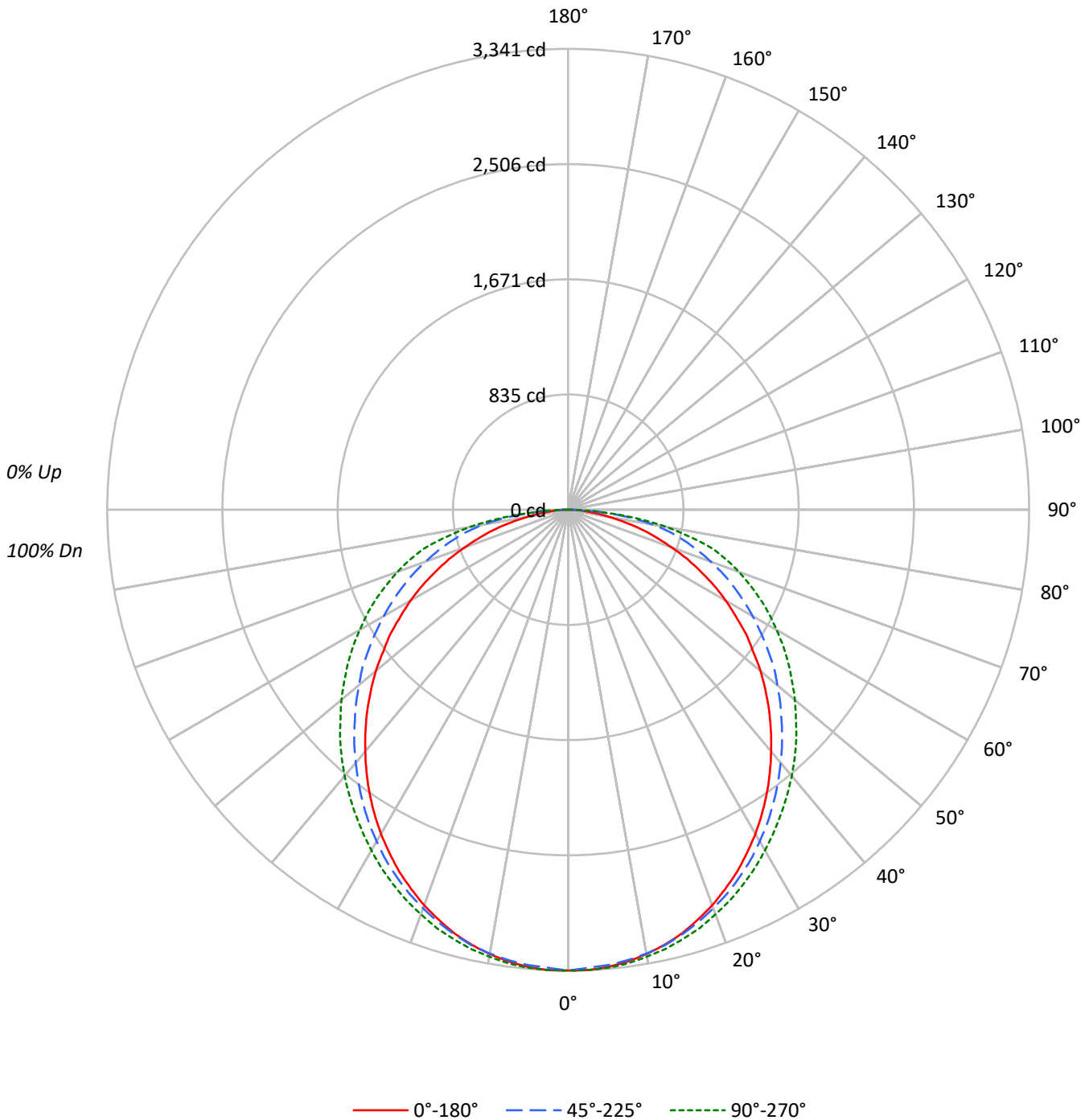
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	4495	4495	4495
5°	4494	4476	4503
10°	4469	4464	4496
15°	4431	4441	4487
20°	4370	4403	4469
25°	4299	4363	4452
30°	4215	4313	4432
35°	4124	4260	4418
40°	4019	4205	4427
45°	3918	4164	4448
50°	3809	4143	4490
55°	3692	4136	4573
60°	3548	4155	4691
65°	3362	4218	4895
70°	3122	4324	5173
75°	2848	4540	5610
80°	2342	4888	5609
85°	1794	4511	4820



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	315.9	3.2
10°-20°	902.0	9.1
20°-30°	1357.4	13.6
30°-40°	1626.7	16.3
40°-50°	1695.2	17.0
50°-60°	1577.1	15.9
60°-70°	1299.0	13.1
70°-80°	884.7	8.9
80°-90°	292.1	2.9
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°	2575.3	25.9
0°-40°	4202.0	42.2
0°-60°	7474.3	75.1
0°-90°	9950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9950.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3341	3341	3341	3341	3341	
5°	3327	3327	3314	3331	3334	316
15°	3181	3185	3188	3218	3221	896
25°	2896	2909	2939	2989	2999	1333
35°	2510	2540	2594	2663	2690	1569
45°	2059	2102	2188	2298	2338	1588
55°	1574	1627	1763	1903	1949	1403
65°	1056	1146	1325	1481	1538	1048
75°	548	671	873	1029	1079	578
85°	116	226	292	312	312	144
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3340.7	3340.7	3340.7	3340.7	3340.7
2.5°	3340.7	3340.7	3324.1	3340.7	3340.7
5°	3327.4	3327.4	3314.1	3330.7	3334.0
7.5°	3304.1	3307.5	3294.2	3314.1	3317.4
10°	3270.9	3274.3	3267.6	3287.5	3290.9
12.5°	3231.1	3234.4	3234.4	3257.7	3261.0
15°	3181.3	3184.6	3187.9	3217.8	3221.1
17.5°	3118.2	3128.1	3134.8	3171.3	3178.0
20°	3051.8	3061.7	3075.0	3114.9	3121.5
22.5°	2975.4	2988.7	3011.9	3055.1	3065.1
25°	2895.7	2909.0	2938.9	2988.7	2998.6
27.5°	2806.0	2826.0	2862.5	2915.6	2928.9
30°	2713.1	2733.0	2776.1	2832.6	2852.5
32.5°	2613.4	2640.0	2689.8	2752.9	2772.8
35°	2510.5	2540.4	2593.5	2663.2	2689.8
37.5°	2400.9	2434.1	2497.2	2573.6	2606.8
40°	2288.0	2327.8	2394.3	2483.9	2520.5
42.5°	2175.1	2211.6	2294.6	2390.9	2430.8
45°	2058.9	2102.0	2188.4	2298.0	2337.8
47.5°	1939.3	1982.5	2085.4	2201.7	2238.2
50°	1819.8	1862.9	1979.2	2102.0	2145.2
52.5°	1690.3	1746.7	1879.5	2002.4	2045.6
55°	1574.0	1627.2	1763.3	1902.8	1949.3
57.5°	1441.2	1504.3	1653.7	1799.8	1849.7
60°	1318.3	1384.8	1544.2	1693.6	1743.4
62.5°	1192.2	1265.2	1434.6	1587.3	1643.8
65°	1056.0	1145.7	1325.0	1481.1	1537.5
67.5°	933.1	1026.1	1215.4	1374.8	1424.6
70°	793.7	906.6	1099.2	1258.6	1315.0
72.5°	674.1	787.0	989.6	1145.7	1202.1
75°	547.9	670.8	873.4	1029.4	1079.2
77.5°	421.7	557.9	760.5	880.0	896.6
80°	302.2	445.0	630.9	700.7	723.9
82.5°	212.5	342.0	464.9	511.4	524.7
85°	116.2	225.8	292.2	312.2	312.2
87.5°	49.8	96.3	116.2	119.5	122.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)