

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: P388629

Luminaire Tested: **24CZ2-120VHE-UNV-L930-CD2-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: P388629  
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-SDWPD1-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: 9830.0 lumens  
Efficiency: N/A  
Efficacy: 117.6 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

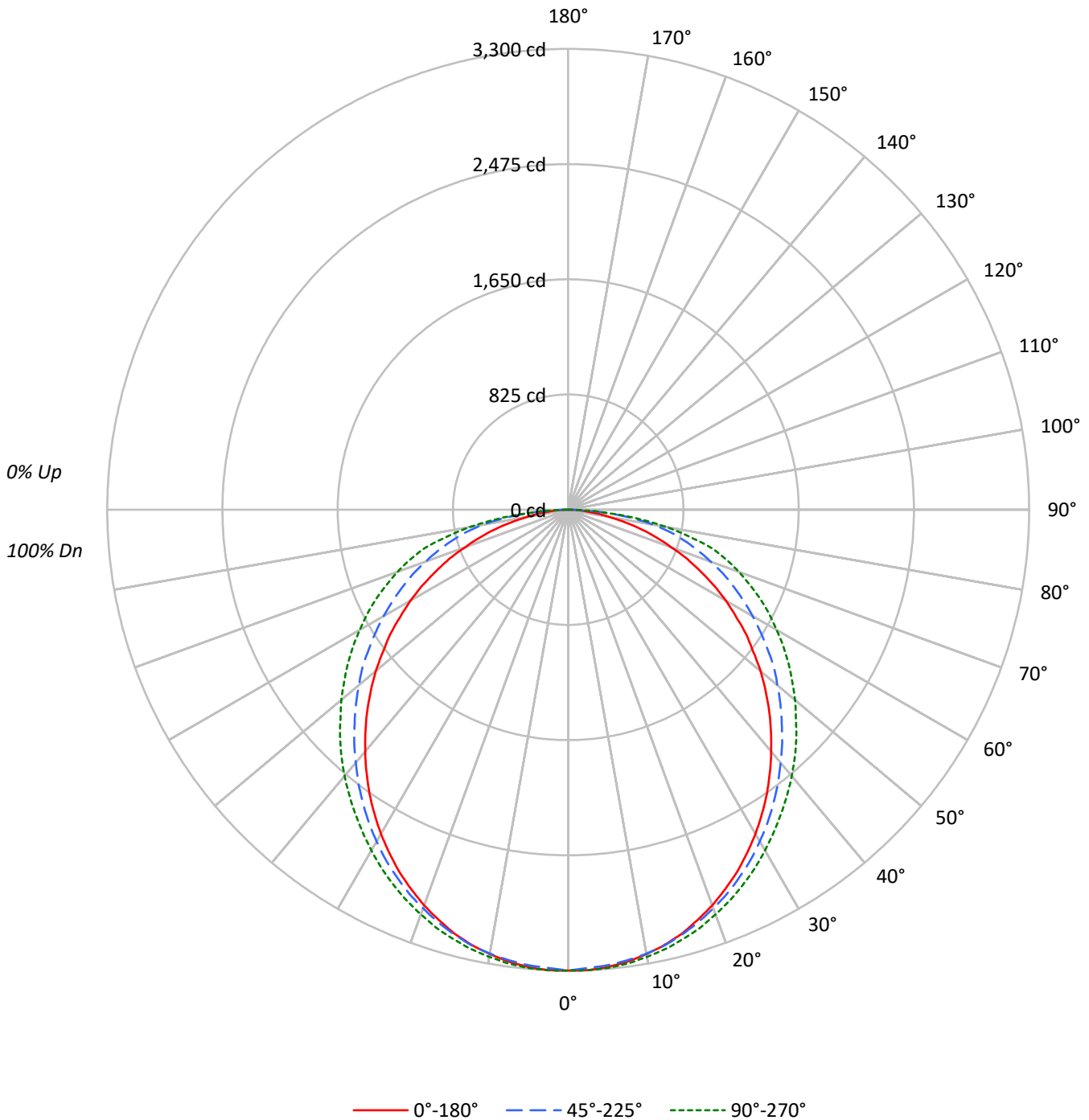
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4441	4441	4441
5°	4440	4422	4449
10°	4415	4411	4442
15°	4378	4387	4433
20°	4317	4350	4416
25°	4247	4310	4398
30°	4164	4261	4378
35°	4074	4209	4365
40°	3970	4155	4374
45°	3870	4114	4395
50°	3763	4093	4436
55°	3648	4087	4518
60°	3505	4105	4635
65°	3322	4167	4836
70°	3085	4272	5111
75°	2814	4485	5543
80°	2313	4830	5542
85°	1772	4457	4761



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.1	3.2
10°-20°	891.1	9.1
20°-30°	1341.0	13.6
30°-40°	1607.1	16.3
40°-50°	1674.7	17.0
50°-60°	1558.1	15.9
60°-70°	1283.3	13.1
70°-80°	874.0	8.9
80°-90°	288.5	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°	2544.3	25.9
0°-40°	4151.3	42.2
0°-60°	7384.2	75.1
0°-90°	9830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9830.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3300	3300	3300	3300	3300	
5°	3287	3287	3274	3290	3294	312
15°	3143	3146	3150	3179	3182	885
25°	2861	2874	2903	2953	2962	1317
35°	2480	2510	2562	2631	2657	1550
45°	2034	2077	2162	2270	2310	1569
55°	1555	1608	1742	1880	1926	1386
65°	1043	1132	1309	1463	1519	1036
75°	541	663	863	1017	1066	571
85°	115	223	289	308	308	142
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3300.4	3300.4	3300.4	3300.4	3300.4
2.5°	3300.4	3300.4	3284.0	3300.4	3300.4
5°	3287.3	3287.3	3274.1	3290.5	3293.8
7.5°	3264.3	3267.6	3254.5	3274.1	3277.4
10°	3231.5	3234.8	3228.2	3247.9	3251.2
12.5°	3192.1	3195.4	3195.4	3218.4	3221.7
15°	3142.9	3146.2	3149.5	3179.0	3182.3
17.5°	3080.6	3090.4	3097.0	3133.1	3139.6
20°	3015.0	3024.8	3037.9	3077.3	3083.9
22.5°	2939.5	2952.6	2975.6	3018.2	3028.1
25°	2860.8	2873.9	2903.4	2952.6	2962.5
27.5°	2772.2	2791.9	2828.0	2880.5	2893.6
30°	2680.3	2700.0	2742.7	2798.4	2818.1
32.5°	2581.9	2608.2	2657.4	2719.7	2739.4
35°	2480.2	2509.7	2562.2	2631.1	2657.4
37.5°	2371.9	2404.8	2467.1	2542.5	2575.4
40°	2260.4	2299.8	2365.4	2454.0	2490.1
42.5°	2148.9	2184.9	2267.0	2362.1	2401.5
45°	2034.0	2076.7	2162.0	2270.2	2309.6
47.5°	1915.9	1958.6	2060.3	2175.1	2211.2
50°	1797.8	1840.5	1955.3	2076.7	2119.3
52.5°	1669.9	1725.7	1856.9	1978.3	2020.9
55°	1555.1	1607.5	1742.1	1879.8	1925.8
57.5°	1423.8	1486.2	1633.8	1778.1	1827.4
60°	1302.4	1368.1	1525.5	1673.2	1722.4
62.5°	1177.8	1249.9	1417.3	1568.2	1623.9
65°	1043.3	1131.8	1309.0	1463.2	1519.0
67.5°	921.9	1013.7	1200.7	1358.2	1407.4
70°	784.1	895.6	1085.9	1243.4	1299.2
72.5°	666.0	777.5	977.6	1131.8	1187.6
75°	541.3	662.7	862.8	1017.0	1066.2
77.5°	416.6	551.2	751.3	869.4	885.8
80°	298.5	439.6	623.3	692.2	715.2
82.5°	210.0	337.9	459.3	505.2	518.4
85°	114.8	223.1	288.7	308.4	308.4
87.5°	49.2	95.1	114.8	118.1	121.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)