

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: P389038

Luminaire Tested: **24CZ2-90VHE-UNV-L930-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: P389038
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: 24CZ2-90VHE-UNV-L930-CD1-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: 7376.7 lumens
Efficiency: N/A
Efficacy: 119.4 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

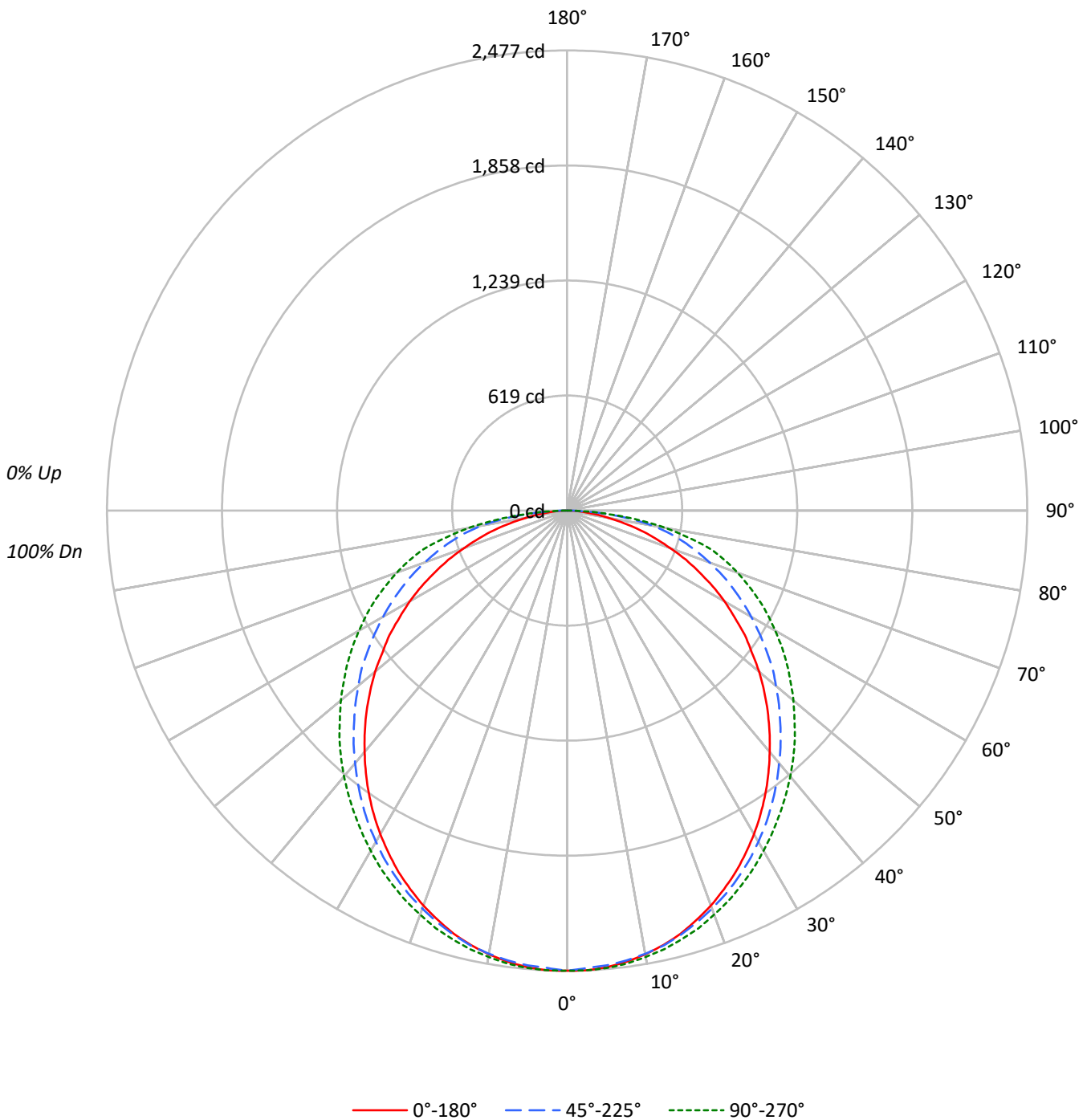
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3332	3332	3332
5°	3332	3318	3338
10°	3313	3310	3333
15°	3285	3292	3327
20°	3240	3264	3314
25°	3187	3235	3300
30°	3125	3198	3286
35°	3057	3158	3276
40°	2979	3118	3282
45°	2904	3087	3298
50°	2824	3071	3329
55°	2738	3067	3390
60°	2630	3081	3478
65°	2493	3127	3629
70°	2315	3206	3835
75°	2112	3366	4159
80°	1736	3625	4159
85°	1331	3344	3572



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.2	3.2
10°-20°	668.7	9.1
20°-30°	1006.3	13.6
30°-40°	1206.0	16.3
40°-50°	1256.8	17.0
50°-60°	1169.3	15.9
60°-70°	963.0	13.1
70°-80°	655.9	8.9
80°-90°	216.5	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°	1909.3	25.9
0°-40°	3115.3	42.2
0°-60°	5541.3	75.1
0°-90°	7376.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7376.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2477	2477	2477	2477	2477	
5°	2467	2467	2457	2469	2472	234
15°	2358	2361	2364	2386	2388	664
25°	2147	2157	2179	2216	2223	988
35°	1861	1883	1923	1974	1994	1163
45°	1526	1558	1622	1704	1733	1177
55°	1167	1206	1307	1411	1445	1040
65°	783	849	982	1098	1140	777
75°	406	497	648	763	800	428
85°	86	167	217	231	231	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2476.7	2476.7	2476.7	2476.7	2476.7
2.5°	2476.7	2476.7	2464.4	2476.7	2476.7
5°	2466.9	2466.9	2457.0	2469.3	2471.8
7.5°	2449.6	2452.1	2442.2	2457.0	2459.5
10°	2425.0	2427.5	2422.5	2437.3	2439.8
12.5°	2395.5	2397.9	2397.9	2415.2	2417.6
15°	2358.5	2361.0	2363.5	2385.6	2388.1
17.5°	2311.8	2319.1	2324.1	2351.1	2356.1
20°	2262.5	2269.9	2279.7	2309.3	2314.2
22.5°	2205.9	2215.7	2233.0	2265.0	2272.4
25°	2146.8	2156.7	2178.8	2215.7	2223.1
27.5°	2080.3	2095.1	2122.2	2161.6	2171.4
30°	2011.4	2026.2	2058.2	2100.0	2114.8
32.5°	1937.5	1957.2	1994.2	2040.9	2055.7
35°	1861.2	1883.4	1922.8	1974.5	1994.2
37.5°	1780.0	1804.6	1851.4	1908.0	1932.6
40°	1696.3	1725.8	1775.1	1841.5	1868.6
42.5°	1612.6	1639.6	1701.2	1772.6	1802.1
45°	1526.4	1558.4	1622.4	1703.7	1733.2
47.5°	1437.8	1469.8	1546.1	1632.3	1659.3
50°	1349.1	1381.1	1467.3	1558.4	1590.4
52.5°	1253.1	1295.0	1393.5	1484.5	1516.5
55°	1167.0	1206.3	1307.3	1410.7	1445.2
57.5°	1068.5	1115.3	1226.0	1334.4	1371.3
60°	977.4	1026.6	1144.8	1255.6	1292.5
62.5°	883.8	938.0	1063.6	1176.8	1218.7
65°	782.9	849.4	982.3	1098.0	1139.9
67.5°	691.8	760.7	901.1	1019.2	1056.2
70°	588.4	672.1	814.9	933.1	974.9
72.5°	499.8	583.5	733.7	849.4	891.2
75°	406.2	497.3	647.5	763.2	800.1
77.5°	312.7	413.6	563.8	652.4	664.7
80°	224.0	329.9	467.8	519.5	536.7
82.5°	157.6	253.6	344.7	379.1	389.0
85°	86.2	167.4	216.6	231.4	231.4
87.5°	36.9	71.4	86.2	88.6	91.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)