

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: P389040

Luminaire Tested: **24CZ2-90VHE-UNV-L935-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: P389040
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-L935-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7468.0 lumens
Efficiency: N/A
Efficacy: 120.8 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

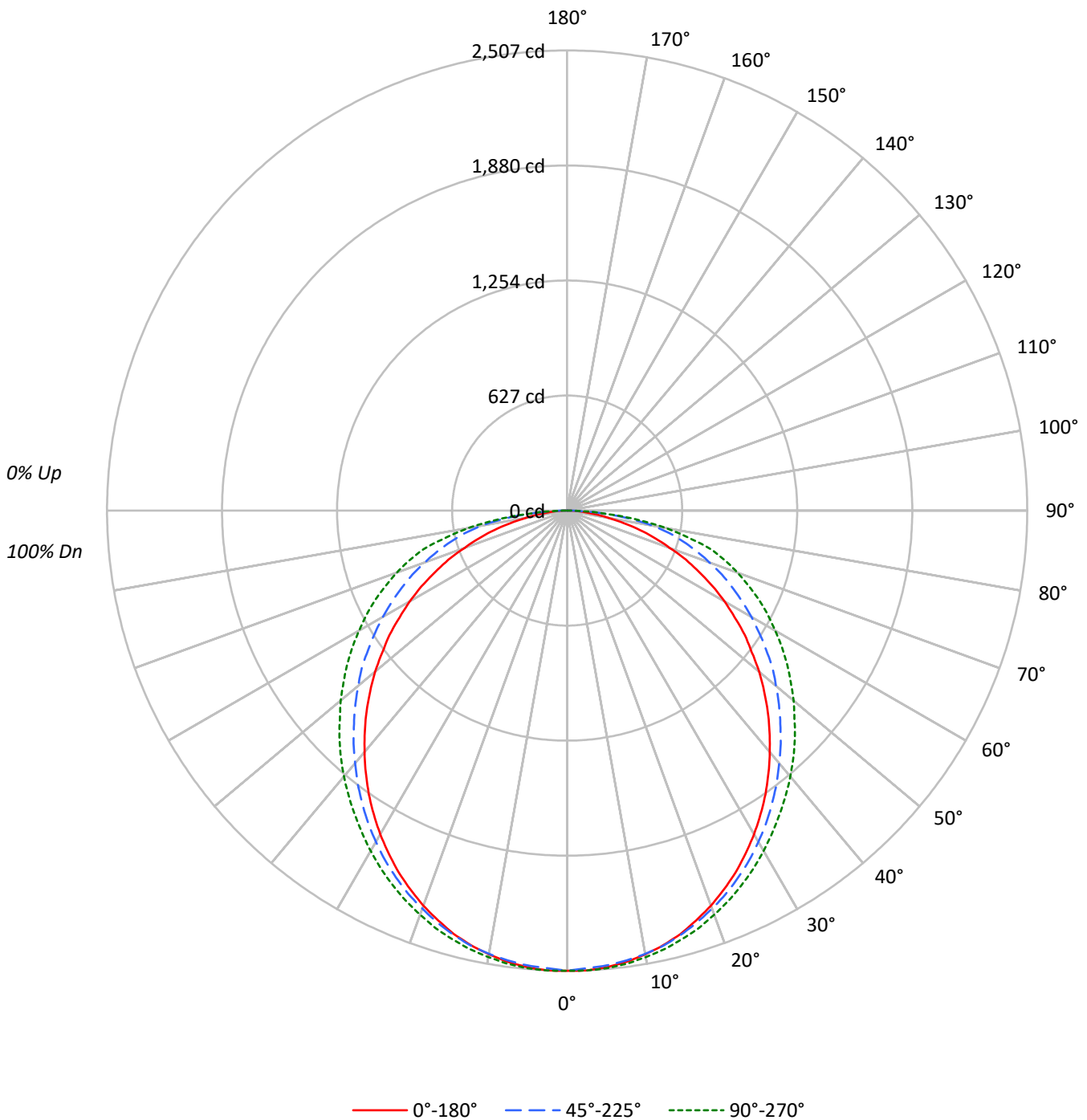
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3374	3374	3374
5°	3373	3360	3380
10°	3354	3351	3375
15°	3326	3333	3368
20°	3280	3305	3355
25°	3227	3275	3341
30°	3164	3237	3326
35°	3095	3197	3316
40°	3016	3156	3323
45°	2940	3125	3339
50°	2859	3109	3370
55°	2771	3105	3432
60°	2663	3119	3521
65°	2523	3166	3674
70°	2343	3246	3883
75°	2138	3408	4211
80°	1757	3670	4210
85°	1346	3386	3617



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.1	3.2
10°-20°	677.0	9.1
20°-30°	1018.8	13.6
30°-40°	1220.9	16.3
40°-50°	1272.3	17.0
50°-60°	1183.7	15.9
60°-70°	975.0	13.1
70°-80°	664.0	8.9
80°-90°	219.2	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°	1932.9	25.9
0°-40°	3153.8	42.2
0°-60°	5609.8	75.1
0°-90°	7468.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7468.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2507	2507	2507	2507	2507	
5°	2497	2497	2487	2500	2502	237
15°	2388	2390	2393	2415	2418	673
25°	2173	2183	2206	2243	2251	1001
35°	1884	1907	1947	1999	2019	1178
45°	1545	1578	1642	1725	1755	1192
55°	1181	1221	1324	1428	1463	1053
65°	793	860	994	1112	1154	787
75°	411	504	656	773	810	434
85°	87	170	219	234	234	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2507.4	2507.4	2507.4	2507.4	2507.4
2.5°	2507.4	2507.4	2494.9	2507.4	2507.4
5°	2497.4	2497.4	2487.4	2499.9	2502.4
7.5°	2479.9	2482.4	2472.5	2487.4	2489.9
10°	2455.0	2457.5	2452.5	2467.5	2470.0
12.5°	2425.1	2427.6	2427.6	2445.0	2447.5
15°	2387.7	2390.2	2392.7	2415.1	2417.6
17.5°	2340.4	2347.8	2352.8	2380.2	2385.2
20°	2290.5	2298.0	2308.0	2337.9	2342.9
22.5°	2233.2	2243.2	2260.6	2293.0	2300.5
25°	2173.4	2183.3	2205.8	2243.2	2250.6
27.5°	2106.1	2121.0	2148.4	2188.3	2198.3
30°	2036.3	2051.2	2083.6	2126.0	2141.0
32.5°	1961.5	1981.5	2018.8	2066.2	2081.2
35°	1884.3	1906.7	1946.6	1998.9	2018.8
37.5°	1802.0	1826.9	1874.3	1931.6	1956.5
40°	1717.3	1747.2	1797.0	1864.3	1891.7
42.5°	1632.5	1659.9	1722.2	1794.5	1824.4
45°	1545.3	1577.7	1642.5	1724.7	1754.6
47.5°	1455.6	1488.0	1565.2	1652.5	1679.9
50°	1365.8	1398.2	1485.5	1577.7	1610.1
52.5°	1268.6	1311.0	1410.7	1502.9	1535.3
55°	1181.4	1221.3	1323.5	1428.1	1463.0
57.5°	1081.7	1129.1	1241.2	1350.9	1388.3
60°	989.5	1039.3	1159.0	1271.1	1308.5
62.5°	894.8	949.6	1076.7	1191.4	1233.7
65°	792.6	859.9	994.5	1111.6	1154.0
67.5°	700.4	770.2	912.2	1031.9	1069.2
70°	595.7	680.4	825.0	944.6	987.0
72.5°	506.0	590.7	742.7	859.9	902.2
75°	411.2	503.5	655.5	772.6	810.0
77.5°	316.5	418.7	570.8	660.5	672.9
80°	226.8	334.0	473.6	525.9	543.3
82.5°	159.5	256.7	348.9	383.8	393.8
85°	87.2	169.5	219.3	234.3	234.3
87.5°	37.4	72.3	87.2	89.7	92.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)