

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: P389039

Luminaire Tested: **24CZ2-90VHE-UNV-L930-CD1-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: P389039
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-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

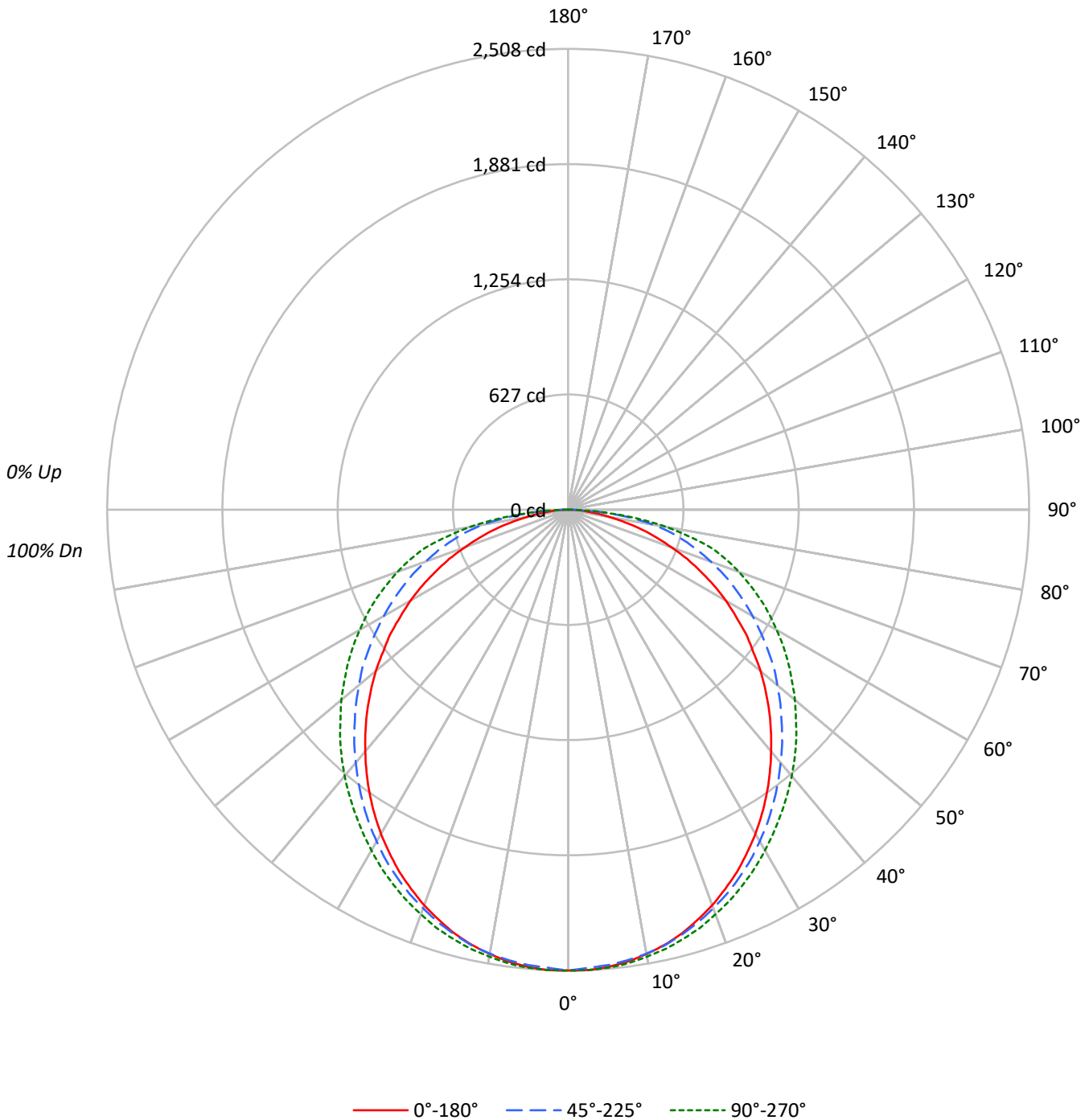
Lumens per Lamp: N/A
Luminaire Lumens: 7469.4 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3374	3360	3380
10°	3355	3351	3375
15°	3327	3334	3368
20°	3280	3305	3355
25°	3227	3275	3342
30°	3164	3238	3327
35°	3096	3198	3317
40°	3017	3157	3323
45°	2941	3126	3339
50°	2860	3110	3371
55°	2772	3105	3433
60°	2663	3119	3522
65°	2524	3167	3675
70°	2344	3246	3884
75°	2138	3408	4212
80°	1758	3670	4210
85°	1348	3387	3617



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.2	3.2
10°-20°	677.1	9.1
20°-30°	1019.0	13.6
30°-40°	1221.1	16.3
40°-50°	1272.5	17.0
50°-60°	1183.9	15.9
60°-70°	975.1	13.1
70°-80°	664.1	8.9
80°-90°	219.3	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°	1933.3	25.9
0°-40°	3154.4	42.2
0°-60°	5610.9	75.1
0°-90°	7469.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7469.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2508	2508	2508	2508	2508	
5°	2498	2498	2488	2500	2503	237
15°	2388	2391	2393	2416	2418	673
25°	2174	2184	2206	2244	2251	1001
35°	1885	1907	1947	1999	2019	1178
45°	1546	1578	1643	1725	1755	1192
55°	1182	1222	1324	1428	1463	1053
65°	793	860	995	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°	2507.8	2507.8	2507.8	2507.8	2507.8
2.5°	2507.8	2507.8	2495.4	2507.8	2507.8
5°	2497.9	2497.9	2487.9	2500.3	2502.8
7.5°	2480.4	2482.9	2472.9	2487.9	2490.4
10°	2455.5	2458.0	2453.0	2467.9	2470.4
12.5°	2425.6	2428.1	2428.1	2445.5	2448.0
15°	2388.2	2390.7	2393.2	2415.6	2418.1
17.5°	2340.8	2348.3	2353.3	2380.7	2385.7
20°	2290.9	2298.4	2308.4	2338.3	2343.3
22.5°	2233.6	2243.6	2261.0	2293.4	2300.9
25°	2173.8	2183.8	2206.2	2243.6	2251.1
27.5°	2106.5	2121.4	2148.9	2188.7	2198.7
30°	2036.7	2051.6	2084.0	2126.4	2141.4
32.5°	1961.9	1981.8	2019.2	2066.6	2081.5
35°	1884.6	1907.0	1946.9	1999.3	2019.2
37.5°	1802.3	1827.3	1874.6	1932.0	1956.9
40°	1717.6	1747.5	1797.4	1864.7	1892.1
42.5°	1632.8	1660.2	1722.6	1794.9	1824.8
45°	1545.6	1578.0	1642.8	1725.1	1755.0
47.5°	1455.8	1488.2	1565.5	1652.8	1680.2
50°	1366.1	1398.5	1485.7	1578.0	1610.4
52.5°	1268.9	1311.2	1411.0	1503.2	1535.6
55°	1181.6	1221.5	1323.7	1428.4	1463.3
57.5°	1081.9	1129.3	1241.4	1351.1	1388.5
60°	989.7	1039.5	1159.2	1271.4	1308.8
62.5°	894.9	949.8	1076.9	1191.6	1234.0
65°	792.7	860.0	994.7	1111.8	1154.2
67.5°	700.5	770.3	912.4	1032.0	1069.4
70°	595.8	680.6	825.1	944.8	987.2
72.5°	506.1	590.8	742.9	860.0	902.4
75°	411.3	503.6	655.6	772.8	810.2
77.5°	316.6	418.8	570.9	660.6	673.1
80°	226.9	334.0	473.6	526.0	543.4
82.5°	159.5	256.8	349.0	383.9	393.9
85°	87.3	169.5	219.4	234.3	234.3
87.5°	37.4	72.3	87.3	89.7	92.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)