

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: P389041

Luminaire Tested: **24CZ2-90VHE-UNV-L935-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: P389041
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-SWPD1-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: 7559.2 lumens
Efficiency: N/A
Efficacy: 122.3 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

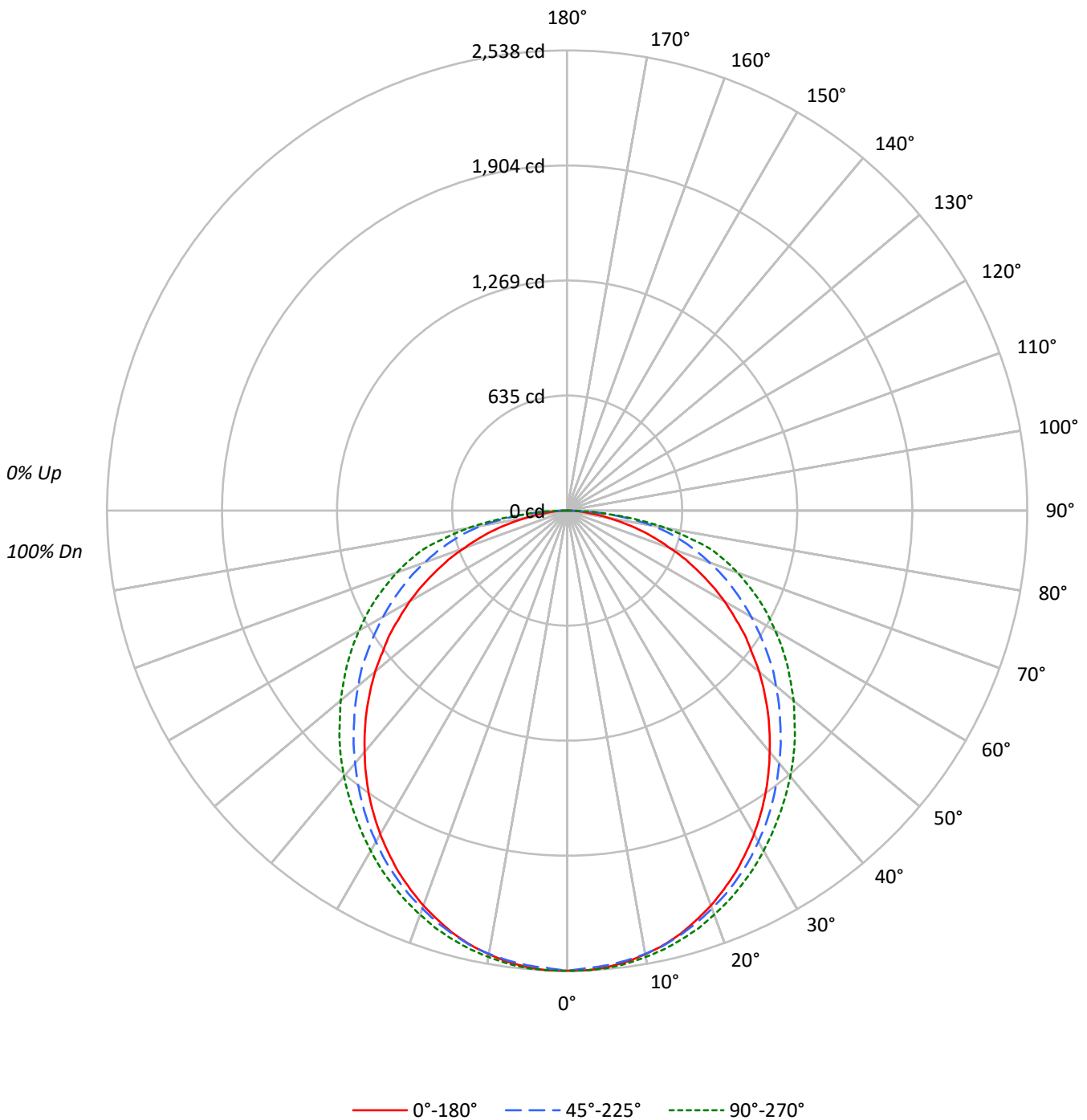
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3415	3415	3415
5°	3414	3401	3421
10°	3395	3392	3416
15°	3367	3374	3409
20°	3320	3345	3396
25°	3266	3315	3382
30°	3202	3277	3367
35°	3133	3236	3357
40°	3053	3195	3363
45°	2976	3164	3380
50°	2894	3147	3412
55°	2805	3142	3474
60°	2695	3157	3564
65°	2554	3205	3719
70°	2372	3285	3930
75°	2164	3449	4262
80°	1779	3714	4262
85°	1363	3427	3660



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.0	3.2
10°-20°	685.3	9.1
20°-30°	1031.2	13.6
30°-40°	1235.8	16.3
40°-50°	1287.8	17.0
50°-60°	1198.2	15.9
60°-70°	986.9	13.1
70°-80°	672.1	8.9
80°-90°	221.9	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°	1956.5	25.9
0°-40°	3192.3	42.2
0°-60°	5678.4	75.1
0°-90°	7559.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7559.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2538	2538	2538	2538	2538	
5°	2528	2528	2518	2530	2533	240
15°	2417	2419	2422	2445	2447	681
25°	2200	2210	2233	2271	2278	1013
35°	1907	1930	1970	2023	2044	1192
45°	1564	1597	1663	1746	1776	1206
55°	1196	1236	1340	1446	1481	1066
65°	802	870	1007	1125	1168	796
75°	416	510	664	782	820	439
85°	88	172	222	237	237	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2538.0	2538.0	2538.0	2538.0	2538.0
2.5°	2538.0	2538.0	2525.4	2538.0	2538.0
5°	2527.9	2527.9	2517.8	2530.4	2532.9
7.5°	2510.2	2512.7	2502.7	2517.8	2520.3
10°	2485.0	2487.5	2482.5	2497.6	2500.1
12.5°	2454.7	2457.2	2457.2	2474.9	2477.4
15°	2416.9	2419.4	2421.9	2444.6	2447.2
17.5°	2368.9	2376.5	2381.6	2409.3	2414.4
20°	2318.5	2326.1	2336.1	2366.4	2371.5
22.5°	2260.5	2270.6	2288.2	2321.0	2328.6
25°	2199.9	2210.0	2232.7	2270.6	2278.1
27.5°	2131.8	2146.9	2174.7	2215.1	2225.1
30°	2061.2	2076.3	2109.1	2152.0	2167.1
32.5°	1985.5	2005.7	2043.5	2091.4	2106.6
35°	1907.3	1930.0	1970.3	2023.3	2043.5
37.5°	1824.0	1849.2	1897.2	1955.2	1980.4
40°	1738.2	1768.5	1819.0	1887.1	1914.8
42.5°	1652.5	1680.2	1743.3	1816.4	1846.7
45°	1564.2	1597.0	1662.6	1745.8	1776.1
47.5°	1473.3	1506.1	1584.3	1672.6	1700.4
50°	1382.5	1415.3	1503.6	1597.0	1629.8
52.5°	1284.1	1327.0	1427.9	1521.3	1554.1
55°	1195.8	1236.2	1339.6	1445.6	1480.9
57.5°	1094.9	1142.8	1256.4	1367.4	1405.2
60°	1001.6	1052.0	1173.1	1286.6	1324.5
62.5°	905.7	961.2	1089.9	1205.9	1248.8
65°	802.3	870.4	1006.6	1125.2	1168.1
67.5°	708.9	779.6	923.4	1044.5	1082.3
70°	603.0	688.7	835.1	956.2	999.0
72.5°	512.1	597.9	751.8	870.4	913.3
75°	416.3	509.6	663.5	782.1	819.9
77.5°	320.4	423.8	577.7	668.6	681.2
80°	229.6	338.1	479.3	532.3	550.0
82.5°	161.5	259.9	353.2	388.5	398.6
85°	88.3	171.6	222.0	237.1	237.1
87.5°	37.8	73.2	88.3	90.8	93.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)