

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: P389017

Luminaire Tested: **24CZ2-85VHE-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: P389017  
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: 24CZ2-85VHE-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: 7180.9 lumens  
Efficiency: N/A  
Efficacy: 124.0 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

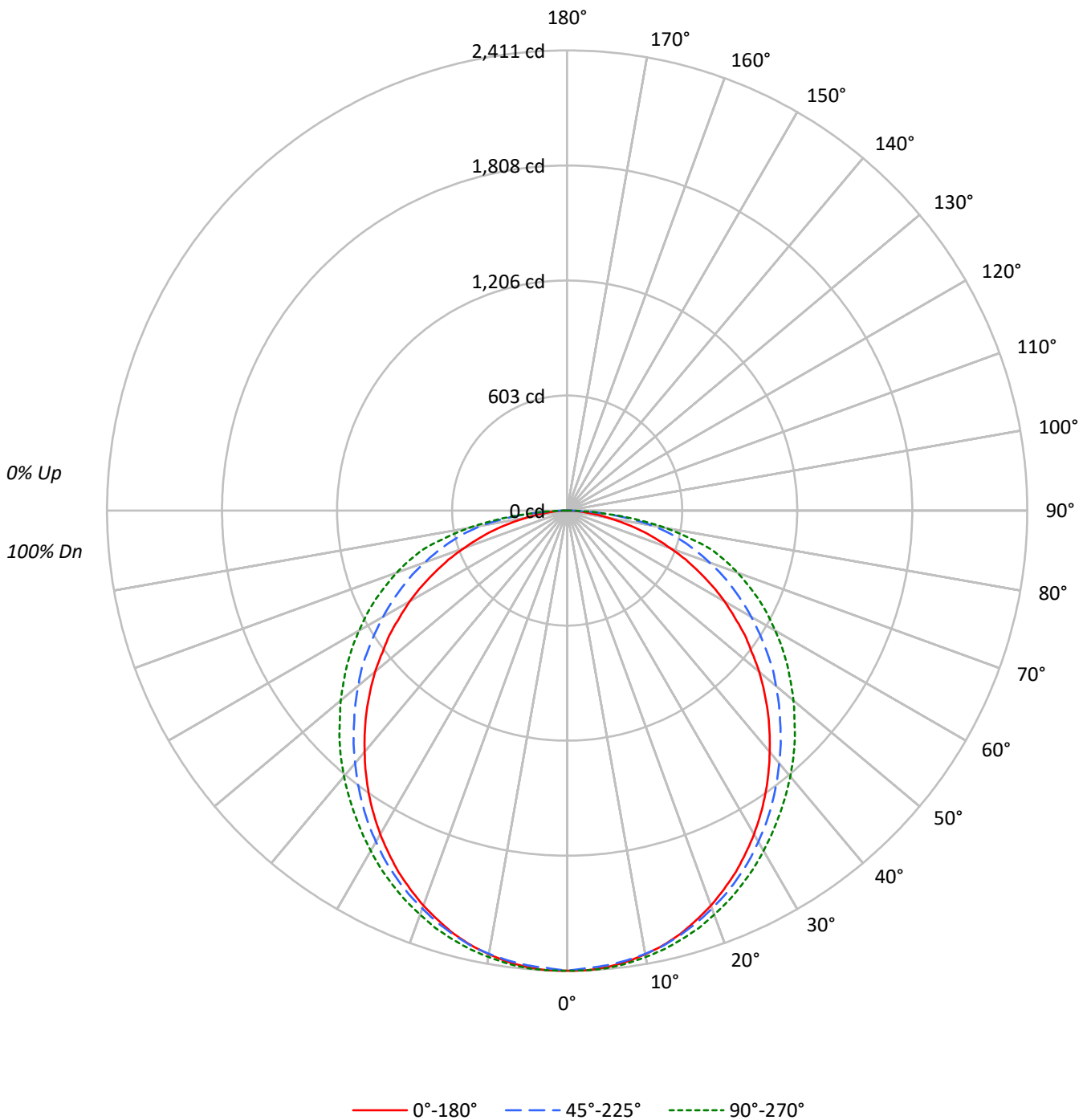
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3244	3244	3244
5°	3243	3230	3250
10°	3225	3222	3245
15°	3198	3205	3238
20°	3154	3178	3226
25°	3102	3149	3213
30°	3042	3113	3198
35°	2976	3074	3188
40°	2900	3035	3195
45°	2827	3005	3210
50°	2749	2990	3241
55°	2665	2985	3300
60°	2560	2999	3386
65°	2426	3044	3533
70°	2253	3121	3733
75°	2056	3277	4049
80°	1690	3529	4049
85°	1295	3256	3478



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.0	3.2
10°-20°	651.0	9.1
20°-30°	979.6	13.6
30°-40°	1174.0	16.3
40°-50°	1223.4	17.0
50°-60°	1138.2	15.9
60°-70°	937.5	13.1
70°-80°	638.5	8.9
80°-90°	210.8	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°	1858.6	25.9
0°-40°	3032.6	42.2
0°-60°	5394.2	75.1
0°-90°	7180.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7180.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2411	2411	2411	2411	2411	
5°	2401	2401	2392	2404	2406	228
15°	2296	2298	2301	2322	2325	647
25°	2090	2099	2121	2157	2164	962
35°	1812	1833	1872	1922	1941	1133
45°	1486	1517	1579	1658	1687	1146
55°	1136	1174	1273	1373	1407	1013
65°	762	827	956	1069	1110	756
75°	395	484	630	743	779	417
85°	84	163	211	225	225	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2411.0	2411.0	2411.0	2411.0	2411.0
2.5°	2411.0	2411.0	2399.0	2411.0	2411.0
5°	2401.4	2401.4	2391.8	2403.8	2406.2
7.5°	2384.6	2387.0	2377.4	2391.8	2394.2
10°	2360.6	2363.0	2358.2	2372.6	2375.0
12.5°	2331.9	2334.3	2334.3	2351.0	2353.4
15°	2295.9	2298.3	2300.7	2322.3	2324.7
17.5°	2250.4	2257.6	2262.4	2288.7	2293.5
20°	2202.5	2209.6	2219.2	2248.0	2252.8
22.5°	2147.3	2156.9	2173.7	2204.9	2212.0
25°	2089.8	2099.4	2121.0	2156.9	2164.1
27.5°	2025.1	2039.5	2065.9	2104.2	2113.8
30°	1958.0	1972.4	2003.5	2044.3	2058.7
32.5°	1886.1	1905.3	1941.2	1986.8	2001.1
35°	1811.8	1833.4	1871.7	1922.1	1941.2
37.5°	1732.7	1756.7	1802.2	1857.4	1881.3
40°	1651.2	1680.0	1727.9	1792.6	1819.0
42.5°	1569.8	1596.1	1656.0	1725.5	1754.3
45°	1485.9	1517.0	1579.3	1658.4	1687.2
47.5°	1399.6	1430.8	1505.1	1588.9	1615.3
50°	1313.3	1344.5	1428.4	1517.0	1548.2
52.5°	1219.9	1260.6	1356.5	1445.1	1476.3
55°	1136.0	1174.3	1272.6	1373.2	1406.8
57.5°	1040.1	1085.7	1193.5	1298.9	1334.9
60°	951.4	999.4	1114.4	1222.3	1258.2
62.5°	860.4	913.1	1035.3	1145.6	1186.3
65°	762.1	826.8	956.2	1068.9	1109.6
67.5°	673.4	740.5	877.1	992.2	1028.1
70°	572.8	654.3	793.3	908.3	949.0
72.5°	486.5	568.0	714.2	826.8	867.6
75°	395.4	484.1	630.3	742.9	778.9
77.5°	304.4	402.6	548.8	635.1	647.1
80°	218.1	321.1	455.4	505.7	522.5
82.5°	153.4	246.8	335.5	369.1	378.7
85°	83.9	163.0	210.9	225.3	225.3
87.5°	35.9	69.5	83.9	86.3	88.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)