

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: P389022

Luminaire Tested: **24CZ2-85VHE-UNV-L950-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: P389022  
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-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7608.0 lumens  
Efficiency: N/A  
Efficacy: 131.4 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

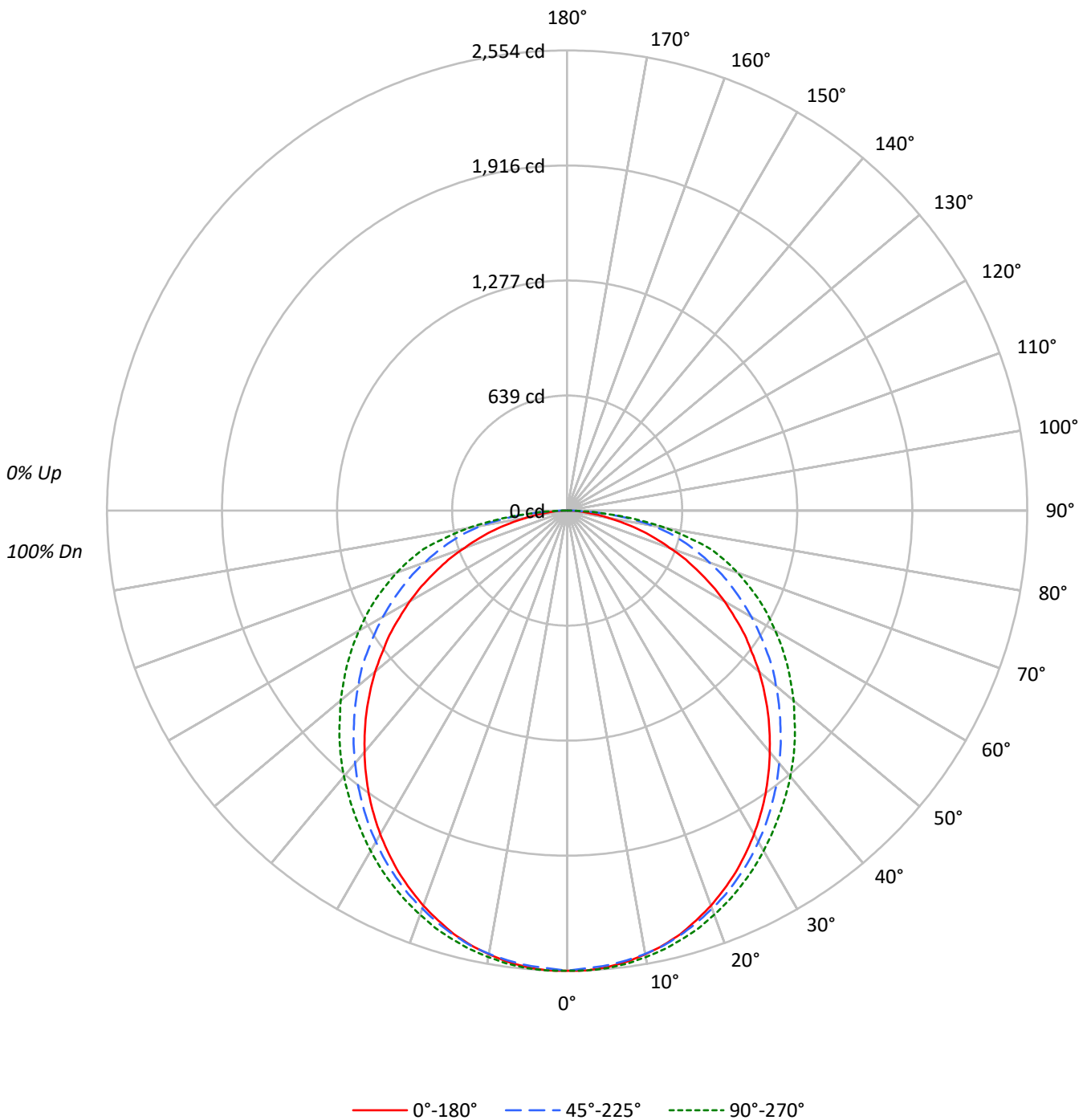
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3437	3437	3437
5°	3436	3422	3443
10°	3417	3414	3438
15°	3388	3395	3431
20°	3341	3367	3418
25°	3287	3336	3404
30°	3223	3298	3389
35°	3153	3257	3378
40°	3073	3215	3385
45°	2996	3184	3401
50°	2912	3168	3433
55°	2823	3163	3496
60°	2713	3177	3587
65°	2571	3225	3743
70°	2388	3306	3956
75°	2178	3472	4290
80°	1791	3738	4289
85°	1372	3449	3685



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.6	3.2
10°-20°	689.7	9.1
20°-30°	1037.9	13.6
30°-40°	1243.8	16.3
40°-50°	1296.2	17.0
50°-60°	1205.9	15.9
60°-70°	993.2	13.1
70°-80°	676.4	8.9
80°-90°	223.3	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°	1969.2	25.9
0°-40°	3212.9	42.2
0°-60°	5715.0	75.1
0°-90°	7608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7608.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2554	2554	2554	2554	2554	
5°	2544	2544	2534	2547	2549	241
15°	2432	2435	2438	2460	2463	685
25°	2214	2224	2247	2285	2293	1019
35°	1920	1942	1983	2036	2057	1200
45°	1574	1607	1673	1757	1788	1214
55°	1204	1244	1348	1455	1490	1073
65°	807	876	1013	1132	1176	801
75°	419	513	668	787	825	442
85°	89	173	223	239	239	110
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2554.4	2554.4	2554.4	2554.4	2554.4
2.5°	2554.4	2554.4	2541.7	2554.4	2554.4
5°	2544.2	2544.2	2534.0	2546.7	2549.3
7.5°	2526.4	2529.0	2518.8	2534.0	2536.6
10°	2501.0	2503.6	2498.5	2513.7	2516.3
12.5°	2470.6	2473.1	2473.1	2490.9	2493.4
15°	2432.5	2435.0	2437.6	2460.4	2463.0
17.5°	2384.2	2391.9	2396.9	2424.9	2429.9
20°	2333.5	2341.1	2351.2	2381.7	2386.8
22.5°	2275.1	2285.2	2303.0	2336.0	2343.6
25°	2214.1	2224.3	2247.1	2285.2	2292.8
27.5°	2145.6	2160.8	2188.7	2229.4	2239.5
30°	2074.5	2089.7	2122.7	2165.9	2181.1
32.5°	1998.3	2018.6	2056.7	2104.9	2120.2
35°	1919.6	1942.4	1983.1	2036.4	2056.7
37.5°	1835.8	1861.2	1909.4	1967.8	1993.2
40°	1749.5	1779.9	1830.7	1899.3	1927.2
42.5°	1663.1	1691.1	1754.5	1828.2	1858.6
45°	1574.3	1607.3	1673.3	1757.1	1787.5
47.5°	1482.8	1515.9	1594.6	1683.4	1711.4
50°	1391.4	1424.4	1513.3	1607.3	1640.3
52.5°	1292.4	1335.6	1437.1	1531.1	1564.1
55°	1203.5	1244.2	1348.3	1454.9	1490.5
57.5°	1102.0	1150.2	1264.5	1376.2	1414.3
60°	1008.0	1058.8	1180.7	1295.0	1333.0
62.5°	911.5	967.4	1096.9	1213.7	1256.9
65°	807.4	876.0	1013.1	1132.4	1175.6
67.5°	713.5	784.6	929.3	1051.2	1089.3
70°	606.9	693.2	840.5	962.3	1005.5
72.5°	515.4	601.8	756.7	876.0	919.2
75°	419.0	512.9	667.8	787.1	825.2
77.5°	322.5	426.6	581.5	672.9	685.6
80°	231.1	340.2	482.4	535.8	553.5
82.5°	162.5	261.5	355.5	391.0	401.2
85°	88.9	172.7	223.4	238.7	238.7
87.5°	38.1	73.6	88.9	91.4	93.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)