

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: P388998

Luminaire Tested: **24CZ2-80VHE-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: P388998  
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: 24CZ2-80VHE-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: 7190.5 lumens  
Efficiency: N/A  
Efficacy: 133.7 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

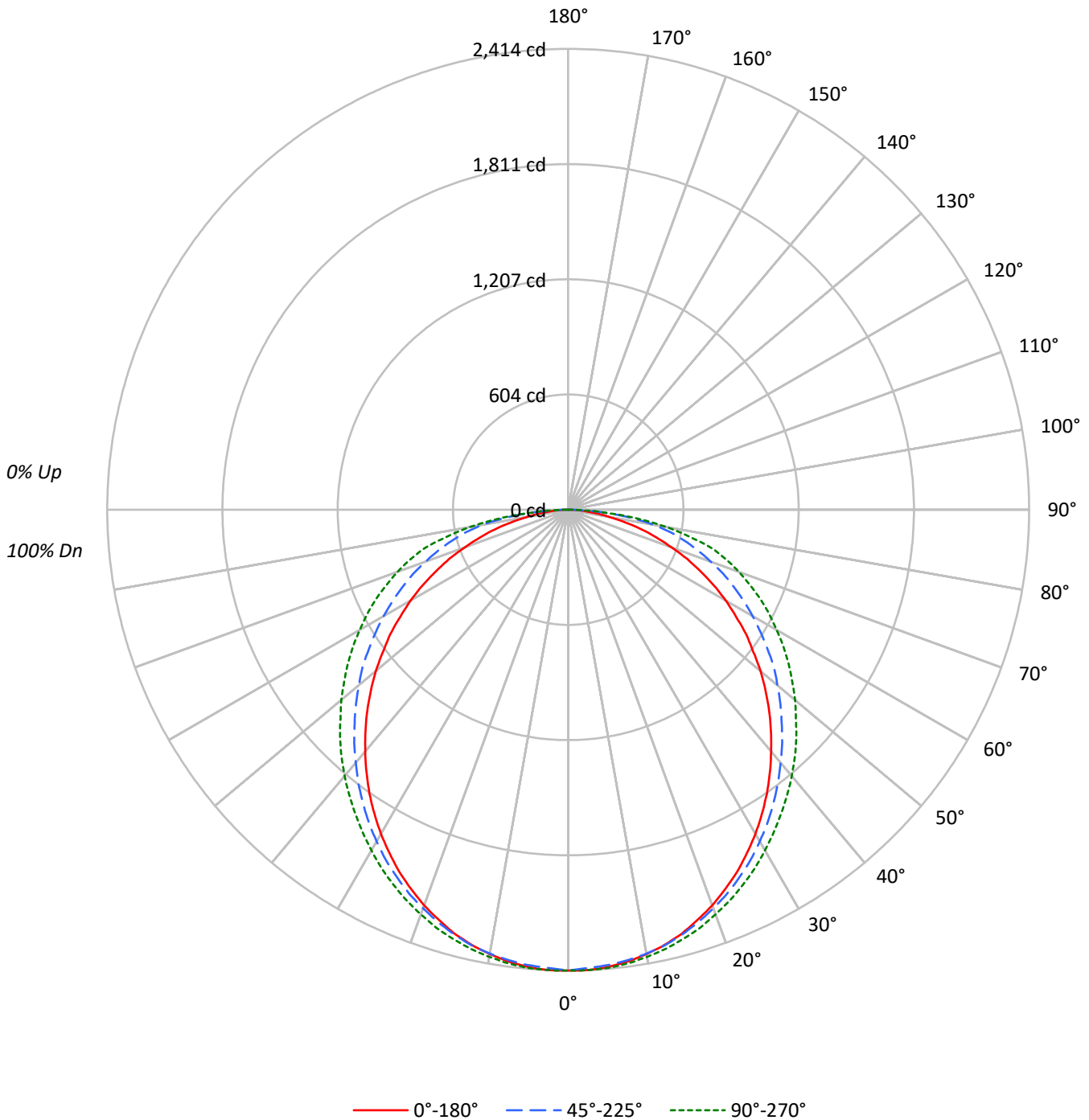
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3248	3248	3248
5°	3248	3235	3254
10°	3230	3226	3249
15°	3202	3209	3243
20°	3158	3182	3230
25°	3107	3153	3217
30°	3046	3117	3203
35°	2980	3078	3193
40°	2904	3039	3199
45°	2831	3009	3215
50°	2753	2994	3245
55°	2668	2989	3305
60°	2564	3003	3390
65°	2429	3048	3537
70°	2256	3125	3738
75°	2059	3281	4054
80°	1692	3533	4054
85°	1297	3260	3483



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.3	3.2
10°-20°	651.8	9.1
20°-30°	980.9	13.6
30°-40°	1175.5	16.3
40°-50°	1225.0	17.0
50°-60°	1139.8	15.9
60°-70°	938.7	13.1
70°-80°	639.3	8.9
80°-90°	211.1	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°	1861.1	25.9
0°-40°	3036.6	42.2
0°-60°	5401.4	75.1
0°-90°	7190.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7190.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2414	2414	2414	2414	2414	
5°	2405	2405	2395	2407	2409	228
15°	2299	2301	2304	2325	2328	648
25°	2093	2102	2124	2160	2167	963
35°	1814	1836	1874	1925	1944	1134
45°	1488	1519	1582	1661	1689	1148
55°	1138	1176	1274	1375	1409	1014
65°	763	828	958	1070	1111	757
75°	396	485	631	744	780	418
85°	84	163	211	226	226	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2414.2	2414.2	2414.2	2414.2	2414.2
2.5°	2414.2	2414.2	2402.2	2414.2	2414.2
5°	2404.6	2404.6	2395.0	2407.0	2409.4
7.5°	2387.8	2390.2	2380.6	2395.0	2397.4
10°	2363.8	2366.2	2361.4	2375.8	2378.2
12.5°	2335.0	2337.4	2337.4	2354.2	2356.6
15°	2299.0	2301.4	2303.8	2325.4	2327.8
17.5°	2253.4	2260.6	2265.4	2291.8	2296.6
20°	2205.4	2212.6	2222.2	2251.0	2255.8
22.5°	2150.2	2159.8	2176.6	2207.8	2215.0
25°	2092.6	2102.2	2123.8	2159.8	2167.0
27.5°	2027.8	2042.2	2068.6	2107.0	2116.6
30°	1960.6	1975.0	2006.2	2047.0	2061.4
32.5°	1888.6	1907.8	1943.8	1989.4	2003.8
35°	1814.2	1835.8	1874.2	1924.6	1943.8
37.5°	1735.0	1759.0	1804.6	1859.8	1883.8
40°	1653.5	1682.3	1730.2	1795.0	1821.4
42.5°	1571.9	1598.3	1658.3	1727.8	1756.6
45°	1487.9	1519.1	1581.5	1660.7	1689.4
47.5°	1401.5	1432.7	1507.1	1591.1	1617.5
50°	1315.1	1346.3	1430.3	1519.1	1550.3
52.5°	1221.5	1262.3	1358.3	1447.1	1478.3
55°	1137.5	1175.9	1274.3	1375.1	1408.7
57.5°	1041.5	1087.1	1195.1	1300.7	1336.7
60°	952.7	1000.7	1115.9	1223.9	1259.9
62.5°	861.5	914.3	1036.7	1147.1	1187.9
65°	763.1	827.9	957.5	1070.3	1111.1
67.5°	674.3	741.5	878.3	993.5	1029.5
70°	573.5	655.1	794.3	909.5	950.3
72.5°	487.2	568.7	715.1	827.9	868.7
75°	396.0	484.8	631.1	743.9	779.9
77.5°	304.8	403.2	549.6	635.9	647.9
80°	218.4	321.6	456.0	506.4	523.2
82.5°	153.6	247.2	336.0	369.6	379.2
85°	84.0	163.2	211.2	225.6	225.6
87.5°	36.0	69.6	84.0	86.4	88.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)