

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: P388996

Luminaire Tested: **24CZ2-80VHE-UNV-L940-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: P388996  
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-L940-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6857.0 lumens  
Efficiency: N/A  
Efficacy: 127.5 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

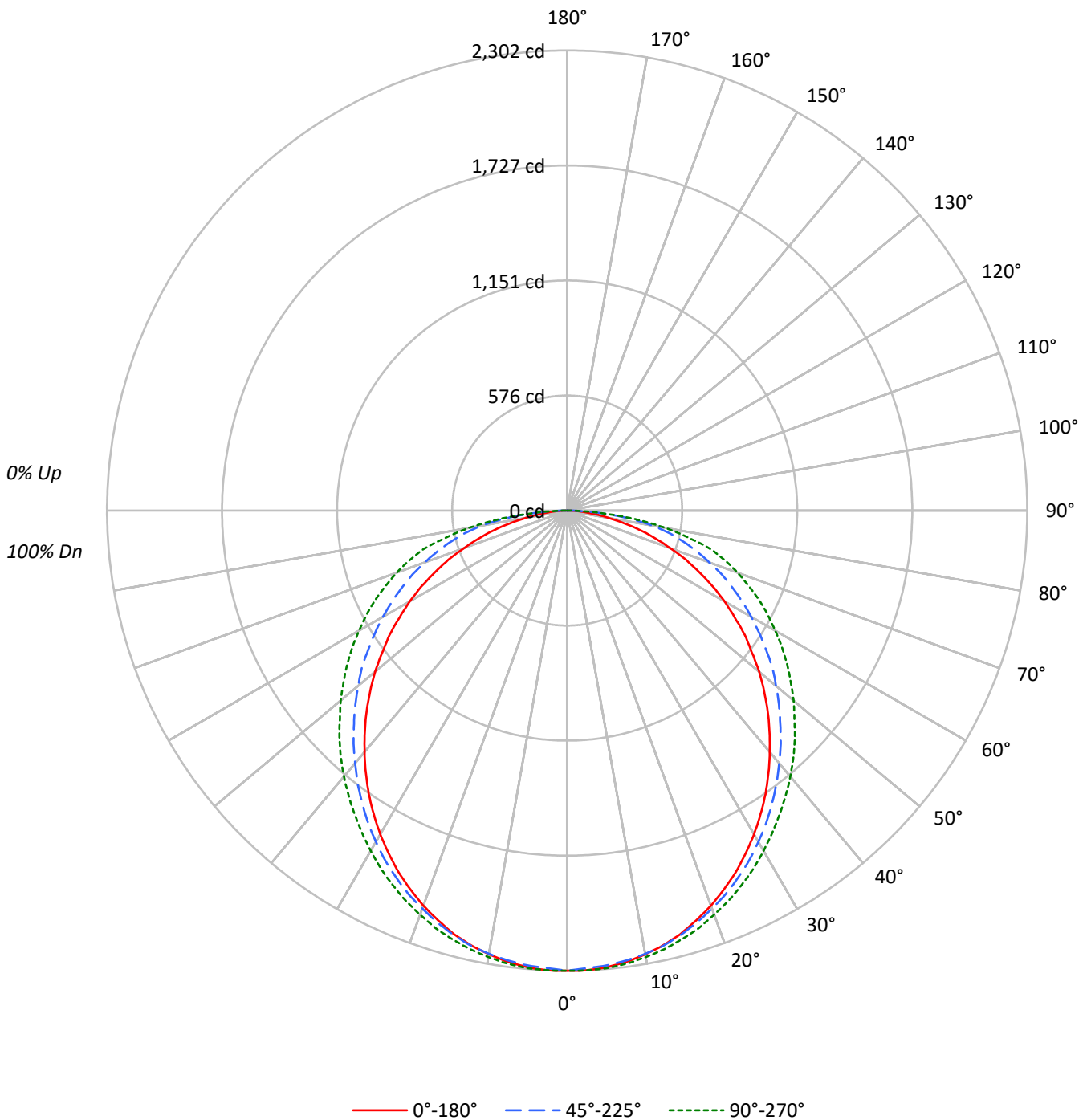
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3098	3098	3098
5°	3097	3085	3103
10°	3080	3077	3099
15°	3054	3060	3092
20°	3011	3034	3080
25°	2963	3007	3068
30°	2905	2972	3054
35°	2842	2936	3045
40°	2770	2898	3051
45°	2700	2870	3066
50°	2625	2855	3095
55°	2544	2851	3151
60°	2445	2863	3233
65°	2317	2907	3373
70°	2151	2980	3565
75°	1963	3129	3867
80°	1614	3369	3866
85°	1237	3109	3321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.7	3.2
10°-20°	621.6	9.1
20°-30°	935.4	13.6
30°-40°	1121.0	16.3
40°-50°	1168.2	17.0
50°-60°	1086.9	15.9
60°-70°	895.2	13.1
70°-80°	609.7	8.9
80°-90°	201.3	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°	1774.8	25.9
0°-40°	2895.8	42.2
0°-60°	5150.9	75.1
0°-90°	6857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6857.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2302	2302	2302	2302	2302	
5°	2293	2293	2284	2295	2298	218
15°	2192	2195	2197	2218	2220	618
25°	1996	2005	2025	2060	2066	919
35°	1730	1751	1787	1835	1854	1081
45°	1419	1449	1508	1584	1611	1094
55°	1085	1121	1215	1311	1343	967
65°	728	790	913	1021	1060	722
75°	378	462	602	709	744	398
85°	80	156	201	215	215	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2302.2	2302.2	2302.2	2302.2	2302.2
2.5°	2302.2	2302.2	2290.8	2302.2	2302.2
5°	2293.1	2293.1	2283.9	2295.3	2297.6
7.5°	2277.0	2279.3	2270.2	2283.9	2286.2
10°	2254.2	2256.4	2251.9	2265.6	2267.9
12.5°	2226.7	2229.0	2229.0	2245.0	2247.3
15°	2192.4	2194.7	2196.9	2217.5	2219.8
17.5°	2148.9	2155.8	2160.3	2185.5	2190.1
20°	2103.1	2110.0	2119.1	2146.6	2151.2
22.5°	2050.5	2059.6	2075.7	2105.4	2112.3
25°	1995.6	2004.7	2025.3	2059.6	2066.5
27.5°	1933.8	1947.5	1972.7	2009.3	2018.4
30°	1869.7	1883.4	1913.2	1952.1	1965.8
32.5°	1801.0	1819.3	1853.7	1897.2	1910.9
35°	1730.1	1750.7	1787.3	1835.4	1853.7
37.5°	1654.6	1677.5	1720.9	1773.6	1796.5
40°	1576.8	1604.2	1650.0	1711.8	1737.0
42.5°	1499.0	1524.1	1581.3	1647.7	1675.2
45°	1418.9	1448.6	1508.1	1583.6	1611.1
47.5°	1336.5	1366.2	1437.2	1517.3	1542.4
50°	1254.1	1283.8	1363.9	1448.6	1478.4
52.5°	1164.8	1203.7	1295.3	1380.0	1409.7
55°	1084.7	1121.4	1215.2	1311.3	1343.3
57.5°	993.2	1036.7	1139.7	1240.4	1274.7
60°	908.5	954.3	1064.1	1167.1	1201.5
62.5°	821.6	871.9	988.6	1093.9	1132.8
65°	727.7	789.5	913.1	1020.7	1059.6
67.5°	643.1	707.1	837.6	947.4	981.8
70°	546.9	624.8	757.5	867.3	906.2
72.5°	464.6	542.4	682.0	789.5	828.4
75°	377.6	462.3	601.9	709.4	743.8
77.5°	290.6	384.5	524.1	606.4	617.9
80°	208.3	306.7	434.8	482.9	498.9
82.5°	146.5	235.7	320.4	352.4	361.6
85°	80.1	155.6	201.4	215.1	215.1
87.5°	34.3	66.4	80.1	82.4	84.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)