

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: P388995

Luminaire Tested: **24CZ2-80VHE-UNV-L940-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: P388995  
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-SDWPD1-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: 6774.3 lumens  
Efficiency: N/A  
Efficacy: 125.9 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

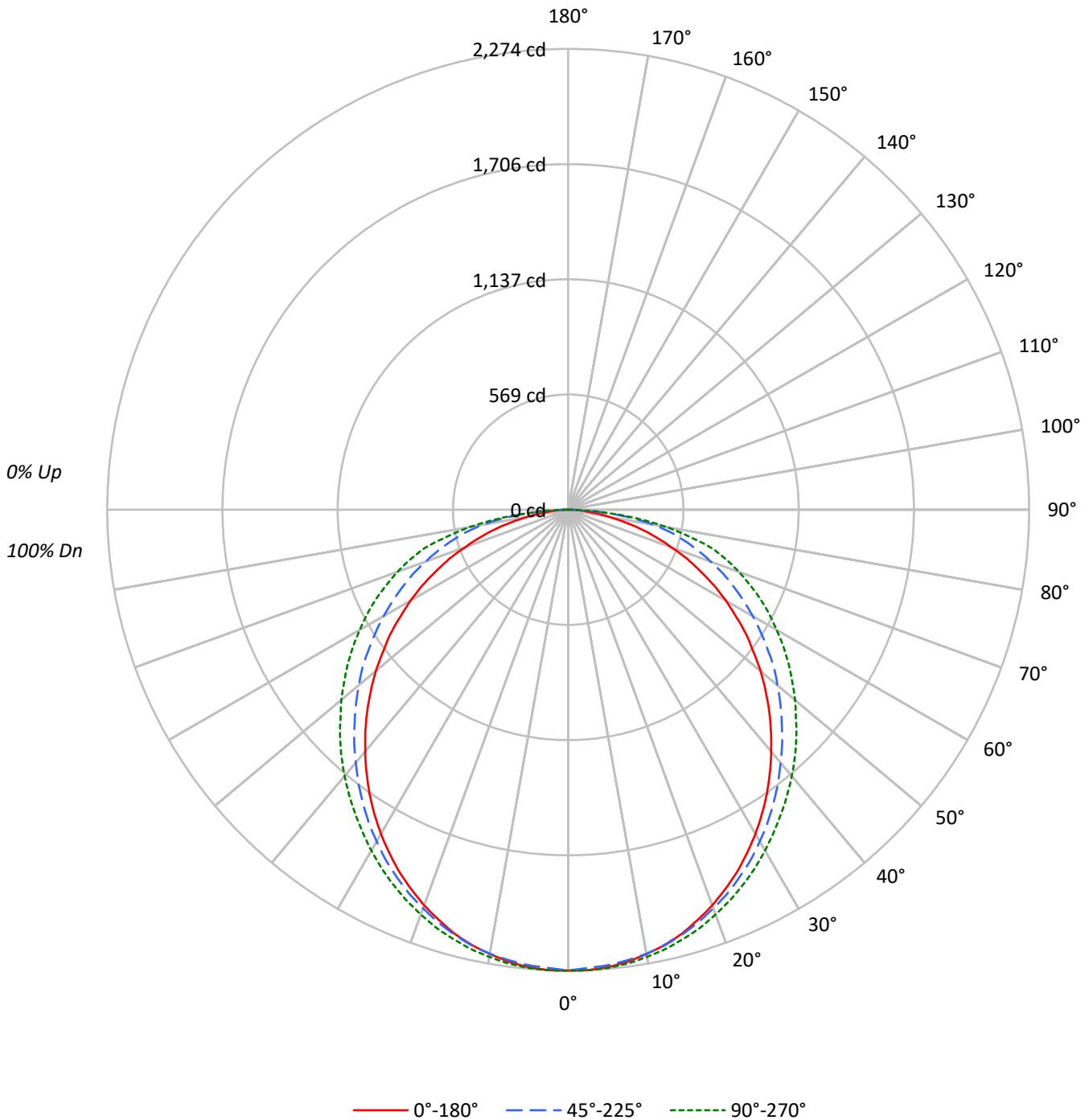
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3060	3060	3060
5°	3060	3048	3066
10°	3043	3039	3061
15°	3017	3023	3055
20°	2975	2998	3043
25°	2927	2971	3031
30°	2870	2937	3017
35°	2807	2900	3008
40°	2736	2863	3014
45°	2667	2835	3029
50°	2593	2821	3057
55°	2514	2816	3113
60°	2415	2829	3194
65°	2289	2872	3333
70°	2126	2944	3522
75°	1939	3091	3820
80°	1594	3329	3819
85°	1221	3072	3281



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	215.1	3.2
10°-20°	614.1	9.1
20°-30°	924.1	13.6
30°-40°	1107.5	16.3
40°-50°	1154.1	17.0
50°-60°	1073.8	15.9
60°-70°	884.4	13.1
70°-80°	602.3	8.9
80°-90°	198.9	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°	1753.4	25.9
0°-40°	2860.9	42.2
0°-60°	5088.7	75.1
0°-90°	6774.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6774.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2274	2274	2274	2274	2274	
5°	2265	2265	2256	2268	2270	215
15°	2166	2168	2170	2191	2193	610
25°	1972	1980	2001	2035	2042	908
35°	1709	1730	1766	1813	1831	1068
45°	1402	1431	1490	1564	1592	1081
55°	1072	1108	1200	1296	1327	955
65°	719	780	902	1008	1047	714
75°	373	457	595	701	735	393
85°	79	154	199	212	212	98
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2274.4	2274.4	2274.4	2274.4	2274.4
2.5°	2274.4	2274.4	2263.1	2274.4	2274.4
5°	2265.4	2265.4	2256.4	2267.7	2269.9
7.5°	2249.6	2251.8	2242.8	2256.4	2258.6
10°	2227.0	2229.2	2224.7	2238.3	2240.5
12.5°	2199.8	2202.1	2202.1	2217.9	2220.2
15°	2165.9	2168.2	2170.4	2190.8	2193.1
17.5°	2123.0	2129.8	2134.3	2159.1	2163.7
20°	2077.8	2084.5	2093.6	2120.7	2125.2
22.5°	2025.8	2034.8	2050.6	2080.0	2086.8
25°	1971.5	1980.5	2000.9	2034.8	2041.6
27.5°	1910.4	1924.0	1948.9	1985.1	1994.1
30°	1847.1	1860.7	1890.1	1928.5	1942.1
32.5°	1779.3	1797.4	1831.3	1874.3	1887.8
35°	1709.2	1729.6	1765.7	1813.2	1831.3
37.5°	1634.6	1657.2	1700.2	1752.2	1774.8
40°	1557.7	1584.9	1630.1	1691.1	1716.0
42.5°	1480.9	1505.7	1562.3	1627.8	1655.0
45°	1401.7	1431.1	1489.9	1564.5	1591.7
47.5°	1320.4	1349.7	1419.8	1499.0	1523.8
50°	1239.0	1268.4	1347.5	1431.1	1460.5
52.5°	1150.8	1189.2	1279.7	1363.3	1392.7
55°	1071.7	1107.8	1200.5	1295.5	1327.1
57.5°	981.2	1024.2	1125.9	1225.4	1259.3
60°	897.6	942.8	1051.3	1153.0	1187.0
62.5°	811.7	861.4	976.7	1080.7	1119.1
65°	719.0	780.0	902.1	1008.4	1046.8
67.5°	635.3	698.6	827.5	936.0	969.9
70°	540.4	617.2	748.4	856.9	895.3
72.5°	459.0	535.8	673.7	780.0	818.4
75°	373.0	456.7	594.6	700.9	734.8
77.5°	287.1	379.8	517.7	599.1	610.4
80°	205.7	303.0	429.6	477.0	492.9
82.5°	144.7	232.9	316.5	348.2	357.2
85°	79.1	153.7	199.0	212.5	212.5
87.5°	33.9	65.6	79.1	81.4	83.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)