

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: P389525

Luminaire Tested: **24CZ2-100VHE-S-UNV-L940-CD1-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: P389525  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-S-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

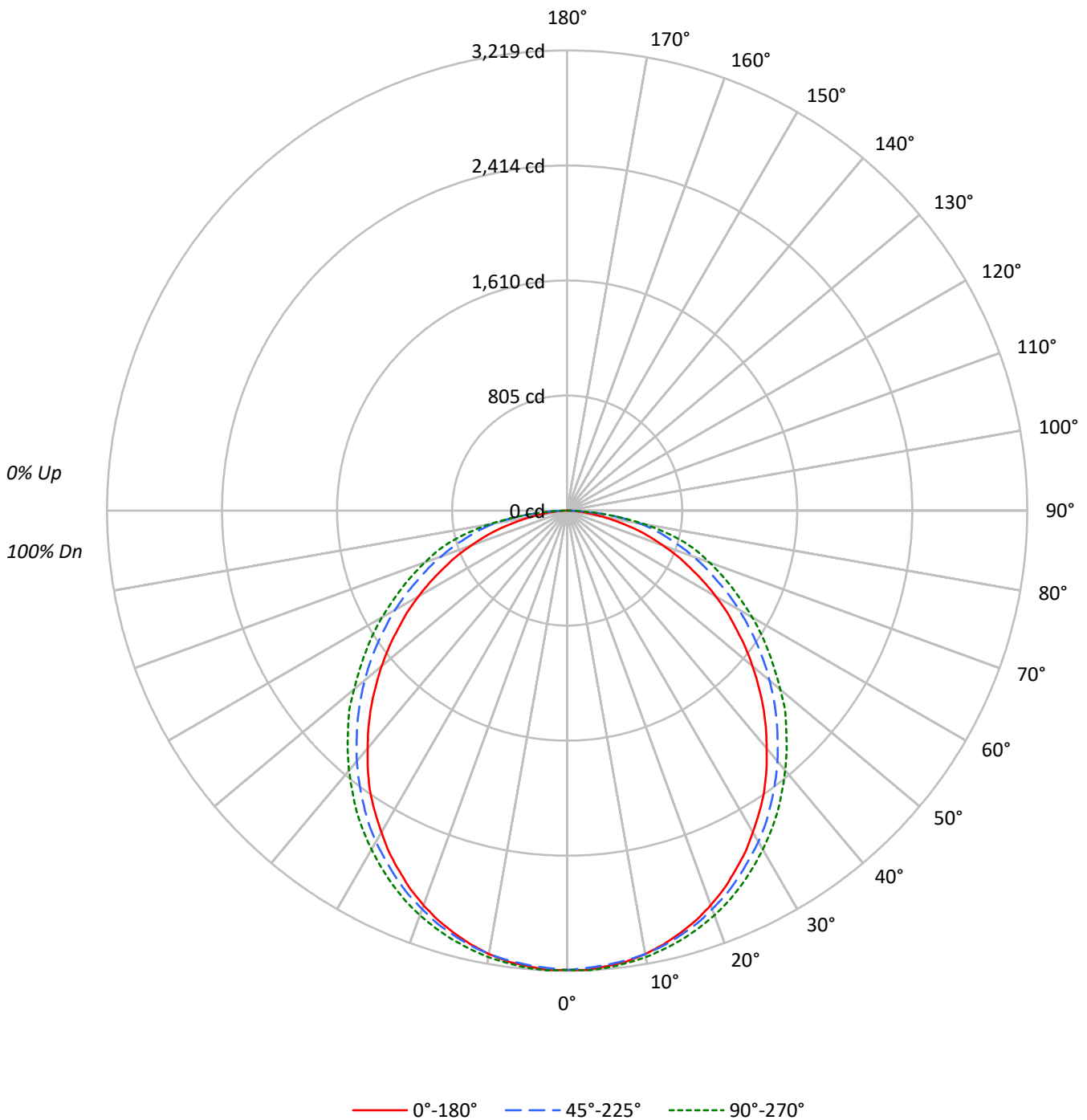
Lumens per Lamp: N/A  
Luminaire Lumens: 9147.1 lumens  
Efficiency: N/A  
Efficacy: 131.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4324	4324	4324
5°	4321	4309	4336
10°	4303	4303	4335
15°	4262	4282	4326
20°	4206	4248	4314
25°	4128	4206	4287
30°	4036	4157	4252
35°	3947	4090	4219
40°	3812	4021	4169
45°	3687	3942	4124
50°	3546	3868	4075
55°	3387	3796	4035
60°	3229	3737	4027
65°	3025	3672	4052
70°	2800	3692	4161
75°	2507	3761	4395
80°	2026	3985	4300
85°	1525	3498	3409



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.2	3.3
10°-20°	869.3	9.5
20°-30°	1306.7	14.3
30°-40°	1556.5	17.0
40°-50°	1593.0	17.4
50°-60°	1434.2	15.7
60°-70°	1126.3	12.3
70°-80°	731.0	8.0
80°-90°	226.1	2.5
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°	2480.2	27.1
0°-40°	4036.7	44.1
0°-60°	7063.8	77.2
0°-90°	9147.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9147.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3213	3213	3213	3213	3213	
5°	3199	3205	3190	3208	3210	304
15°	3059	3068	3074	3100	3106	863
25°	2780	2804	2833	2879	2888	1281
35°	2403	2432	2490	2551	2568	1499
45°	1938	1984	2072	2150	2168	1494
55°	1444	1508	1618	1703	1720	1295
65°	950	1023	1154	1249	1273	946
75°	482	575	724	822	846	510
85°	99	183	227	221	221	119
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3213.4	3213.4	3213.4	3213.4	3213.4
2.5°	3216.3	3216.3	3201.8	3216.3	3219.2
5°	3198.9	3204.7	3190.2	3207.6	3210.5
7.5°	3181.5	3181.5	3172.8	3190.2	3193.1
10°	3149.5	3152.4	3149.5	3169.9	3172.8
12.5°	3108.8	3114.7	3117.6	3137.9	3140.8
15°	3059.4	3068.2	3074.0	3100.1	3105.9
17.5°	3004.2	3013.0	3027.5	3056.5	3062.4
20°	2937.4	2949.0	2966.5	3004.2	3013.0
22.5°	2864.8	2876.4	2905.5	2940.3	2954.9
25°	2780.5	2803.8	2832.8	2879.3	2888.0
27.5°	2696.3	2716.6	2754.4	2803.8	2815.4
30°	2597.5	2629.4	2675.9	2725.3	2736.9
32.5°	2501.6	2533.6	2588.8	2641.1	2655.6
35°	2402.8	2431.9	2490.0	2551.0	2568.4
37.5°	2289.5	2327.3	2391.2	2452.2	2469.6
40°	2170.4	2216.9	2289.5	2353.4	2373.8
42.5°	2057.1	2106.5	2179.1	2248.8	2272.1
45°	1937.9	1984.4	2071.6	2150.0	2167.5
47.5°	1815.9	1868.2	1961.2	2039.6	2068.7
50°	1693.9	1749.1	1847.9	1929.2	1946.7
52.5°	1571.9	1630.0	1734.6	1821.7	1830.4
55°	1444.0	1507.9	1618.3	1702.6	1720.0
57.5°	1327.8	1383.0	1502.1	1589.3	1609.6
60°	1200.0	1261.0	1388.8	1470.2	1496.3
62.5°	1077.9	1141.8	1275.5	1356.8	1380.1
65°	950.1	1022.7	1153.5	1249.3	1272.6
67.5°	839.7	909.4	1048.9	1141.8	1165.1
70°	711.8	790.3	938.5	1034.3	1057.6
72.5°	601.4	682.8	831.0	923.9	958.8
75°	482.3	575.3	723.5	822.2	845.5
77.5°	366.1	473.6	624.7	700.2	700.2
80°	261.5	374.8	514.3	549.1	554.9
82.5°	171.4	281.8	380.6	377.7	377.7
85°	98.8	183.0	226.6	220.8	220.8
87.5°	37.8	75.5	81.4	81.4	78.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)