

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: P388590

Luminaire Tested: **24CZ2-100VHE-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: P388590  
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: 24CZ2-100VHE-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: 9015.5 lumens  
Efficiency: N/A  
Efficacy: 129.5 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

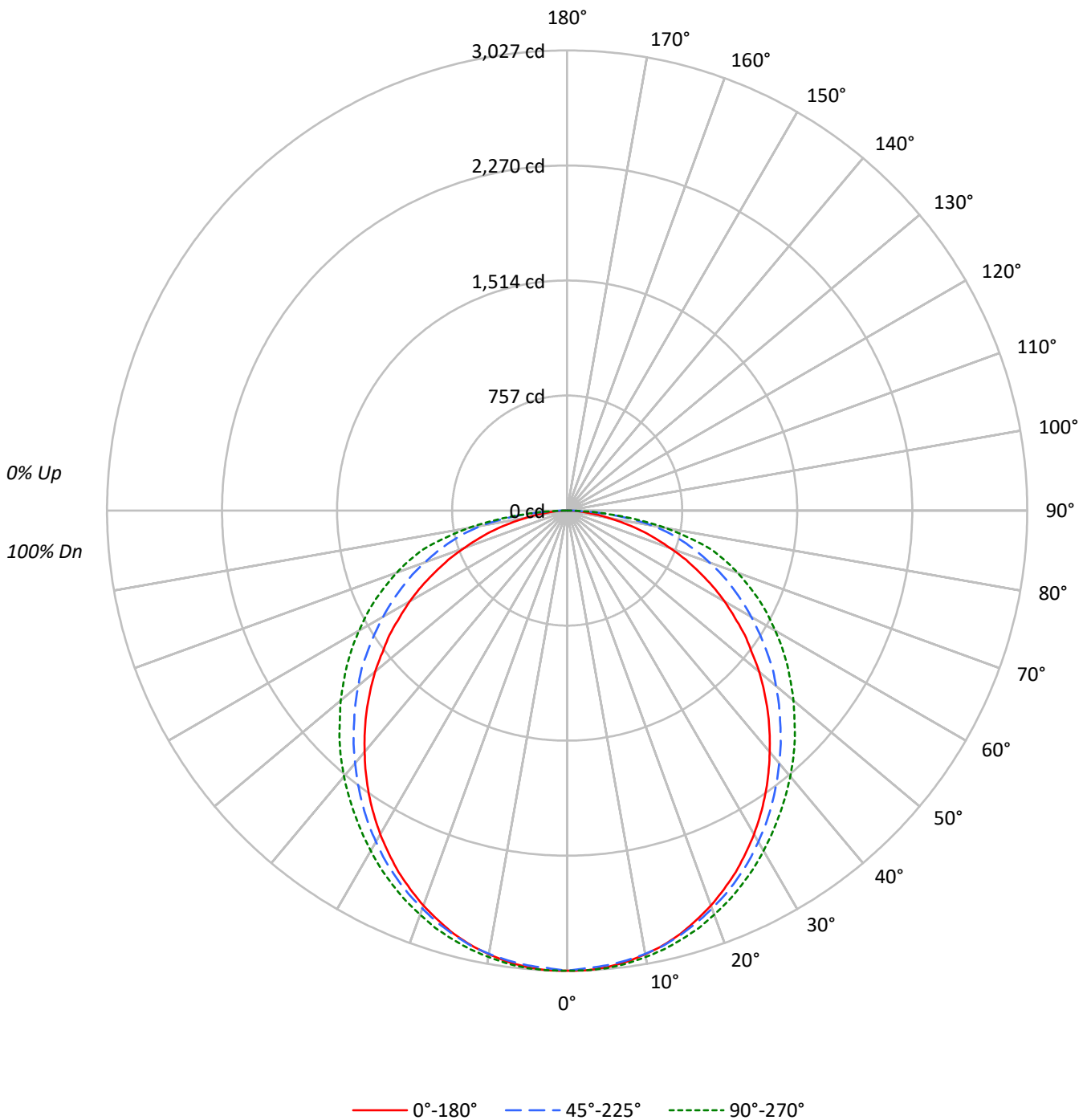
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4073	4073	4073
5°	4072	4056	4080
10°	4049	4045	4074
15°	4015	4024	4065
20°	3959	3989	4050
25°	3895	3953	4034
30°	3819	3908	4016
35°	3736	3860	4003
40°	3641	3810	4011
45°	3550	3773	4031
50°	3451	3754	4069
55°	3346	3748	4143
60°	3214	3765	4251
65°	3046	3822	4435
70°	2829	3918	4687
75°	2581	4114	5084
80°	2122	4430	5082
85°	1626	4088	4366



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	286.3	3.2
10°-20°	817.3	9.1
20°-30°	1229.9	13.6
30°-40°	1473.9	16.3
40°-50°	1535.9	17.0
50°-60°	1429.0	15.9
60°-70°	1177.0	13.1
70°-80°	801.6	8.9
80°-90°	264.6	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°	2333.4	25.9
0°-40°	3807.3	42.2
0°-60°	6772.3	75.1
0°-90°	9015.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9015.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3027	3027	3027	3027	3027	
5°	3015	3015	3003	3018	3021	286
15°	2882	2886	2888	2916	2919	812
25°	2624	2636	2663	2708	2717	1208
35°	2275	2302	2350	2413	2437	1422
45°	1866	1905	1983	2082	2118	1439
55°	1426	1474	1598	1724	1766	1271
65°	957	1038	1200	1342	1393	950
75°	496	608	791	933	978	523
85°	105	205	265	283	283	131
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3026.9	3026.9	3026.9	3026.9	3026.9
2.5°	3026.9	3026.9	3011.9	3026.9	3026.9
5°	3014.9	3014.9	3002.9	3017.9	3020.9
7.5°	2993.8	2996.8	2984.8	3002.9	3005.9
10°	2963.7	2966.7	2960.7	2978.8	2981.8
12.5°	2927.6	2930.6	2930.6	2951.7	2954.7
15°	2882.5	2885.5	2888.5	2915.6	2918.6
17.5°	2825.3	2834.4	2840.4	2873.5	2879.5
20°	2765.2	2774.2	2786.2	2822.3	2828.3
22.5°	2695.9	2708.0	2729.0	2768.2	2777.2
25°	2623.7	2635.8	2662.8	2708.0	2717.0
27.5°	2542.5	2560.5	2593.6	2641.8	2653.8
30°	2458.2	2476.3	2515.4	2566.6	2584.6
32.5°	2368.0	2392.1	2437.2	2494.4	2512.4
35°	2274.7	2301.8	2349.9	2413.1	2437.2
37.5°	2175.4	2205.5	2262.7	2331.9	2362.0
40°	2073.1	2109.2	2169.4	2250.6	2283.7
42.5°	1970.8	2003.9	2079.1	2166.4	2202.5
45°	1865.5	1904.6	1982.8	2082.1	2118.2
47.5°	1757.2	1796.3	1889.6	1994.9	2028.0
50°	1648.9	1688.0	1793.3	1904.6	1943.7
52.5°	1531.5	1582.7	1703.0	1814.3	1853.5
55°	1426.2	1474.3	1597.7	1724.1	1766.2
57.5°	1305.8	1363.0	1498.4	1630.8	1675.9
60°	1194.5	1254.7	1399.1	1534.5	1579.7
62.5°	1080.2	1146.4	1299.8	1438.2	1489.4
65°	956.8	1038.1	1200.5	1342.0	1393.1
67.5°	845.5	929.7	1101.2	1245.7	1290.8
70°	719.1	821.4	995.9	1140.4	1191.5
72.5°	610.8	713.1	896.6	1038.1	1089.2
75°	496.5	607.8	791.3	932.7	977.9
77.5°	382.1	505.5	689.0	797.4	812.4
80°	273.8	403.2	571.7	634.9	655.9
82.5°	192.6	309.9	421.2	463.4	475.4
85°	105.3	204.6	264.8	282.8	282.8
87.5°	45.1	87.3	105.3	108.3	111.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)