

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: P388305

Luminaire Tested: **24CZ2-100VHE-SQR-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: P388305  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-SQR-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8658.3 lumens  
Efficiency: N/A  
Efficacy: 124.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

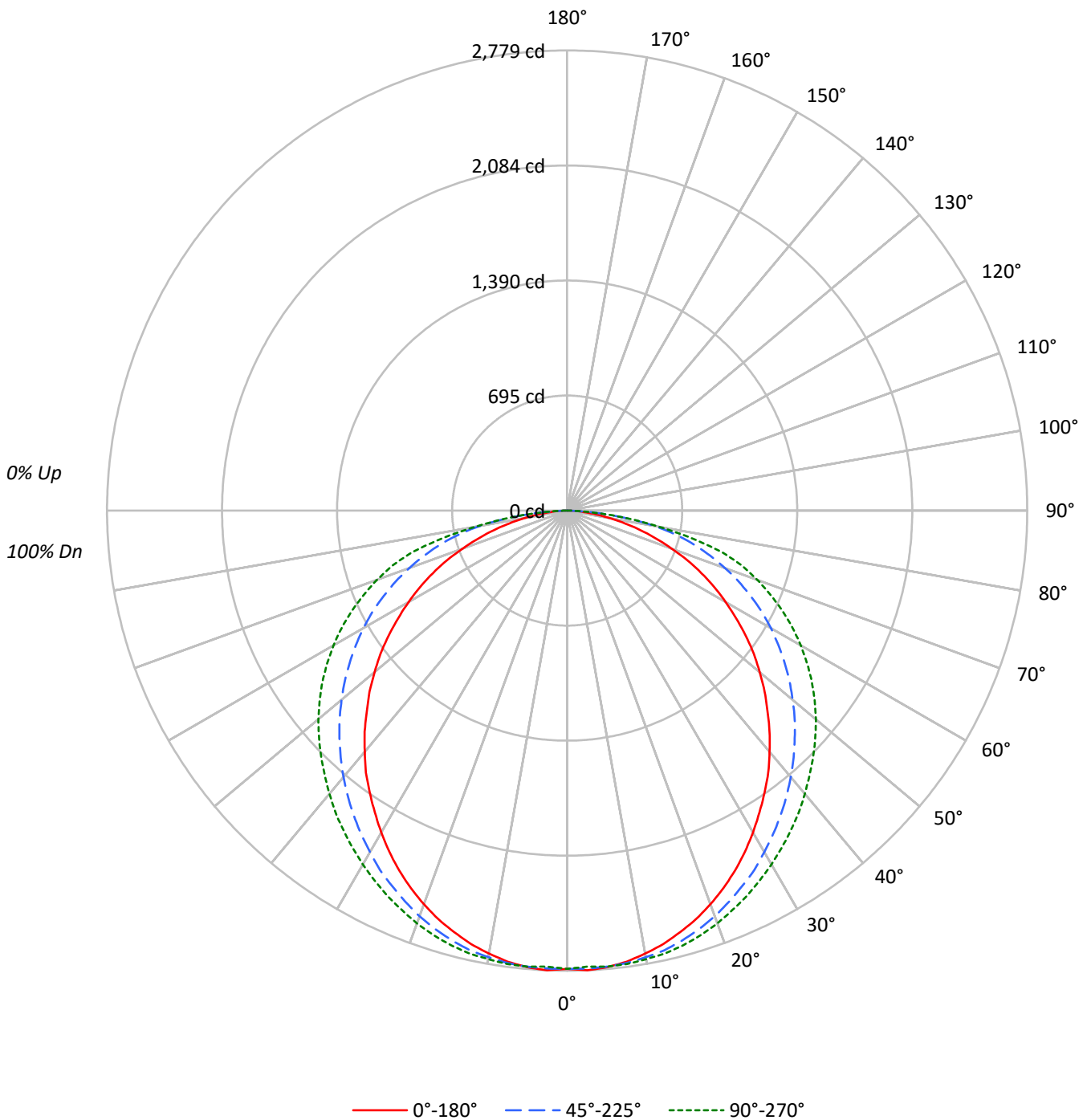
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

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

	0°	45°	90°
0°	3724	3724	3724
5°	3738	3734	3734
10°	3711	3742	3758
15°	3672	3744	3784
20°	3623	3734	3799
25°	3561	3714	3812
30°	3487	3700	3833
35°	3414	3691	3870
40°	3339	3691	3922
45°	3253	3699	3999
50°	3178	3723	4105
55°	3085	3763	4232
60°	2978	3824	4385
65°	2849	3896	4570
70°	2643	3993	4803
75°	2393	4132	5024
80°	2016	4143	4320
85°	1545	3134	3134



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	262.7	3.0
10°-20°	755.8	8.7
20°-30°	1148.1	13.3
30°-40°	1396.5	16.1
40°-50°	1486.8	17.2
50°-60°	1416.1	16.4
60°-70°	1184.3	13.7
70°-80°	789.6	9.1
80°-90°	218.5	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°	2166.6	25.0
0°-40°	3563.1	41.2
0°-60°	6466.0	74.7
0°-90°	8658.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8658.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2768	2768	2768	2768	2768	
5°	2768	2750	2765	2765	2765	263
15°	2636	2642	2688	2708	2716	743
25°	2399	2430	2502	2545	2568	1104
35°	2079	2139	2247	2322	2356	1301
45°	1710	1801	1944	2053	2101	1322
55°	1315	1430	1604	1744	1804	1176
65°	895	1026	1224	1375	1435	884
75°	460	606	795	929	966	488
85°	100	186	203	200	203	121
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2767.6	2767.6	2767.6	2767.6	2767.6
2.5°	2779.1	2759.0	2767.6	2767.6	2756.2
5°	2767.6	2750.5	2764.8	2764.8	2764.8
7.5°	2747.6	2733.3	2756.2	2761.9	2761.9
10°	2716.2	2710.4	2739.0	2747.6	2750.5
12.5°	2681.8	2679.0	2719.0	2730.4	2739.0
15°	2636.1	2641.8	2687.6	2707.6	2716.2
17.5°	2587.5	2598.9	2650.4	2679.0	2687.6
20°	2530.3	2547.5	2607.5	2636.1	2653.2
22.5°	2467.4	2493.1	2556.0	2590.3	2610.4
25°	2398.8	2430.2	2501.7	2544.6	2567.5
27.5°	2324.5	2364.5	2447.4	2496.0	2518.9
30°	2244.4	2290.1	2381.6	2438.8	2467.4
32.5°	2161.5	2215.8	2315.9	2378.8	2413.1
35°	2078.6	2138.6	2247.3	2321.6	2355.9
37.5°	1995.7	2055.7	2175.8	2255.8	2298.7
40°	1901.3	1972.8	2101.4	2190.1	2233.0
42.5°	1809.8	1887.0	2024.2	2121.5	2167.2
45°	1709.7	1801.2	1944.2	2052.8	2101.4
47.5°	1618.3	1709.7	1864.1	1978.5	2032.8
50°	1518.2	1615.4	1778.4	1904.2	1961.3
52.5°	1421.0	1521.0	1692.6	1827.0	1884.2
55°	1315.2	1429.6	1604.0	1744.1	1804.1
57.5°	1209.4	1332.3	1512.5	1658.3	1718.3
60°	1106.5	1232.3	1421.0	1566.8	1629.7
62.5°	1003.5	1129.3	1326.6	1475.3	1535.3
65°	894.9	1026.4	1223.7	1375.2	1435.3
67.5°	786.3	923.5	1120.8	1272.3	1329.5
70°	671.9	817.7	1015.0	1163.7	1220.8
72.5°	566.1	711.9	906.3	1052.2	1106.5
75°	460.3	606.1	794.8	929.2	966.4
77.5°	357.4	503.2	671.9	760.5	769.1
80°	260.2	397.4	534.7	560.4	557.5
82.5°	174.4	297.3	368.8	371.7	380.3
85°	100.1	185.8	203.0	200.1	203.0
87.5°	40.0	65.8	57.2	42.9	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)