

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: P389886

Luminaire Tested: **24CZ2-70VHE-S-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: P389886  
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: 24CZ2-70VHE-S-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6561.6 lumens  
Efficiency: N/A  
Efficacy: 143.6 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

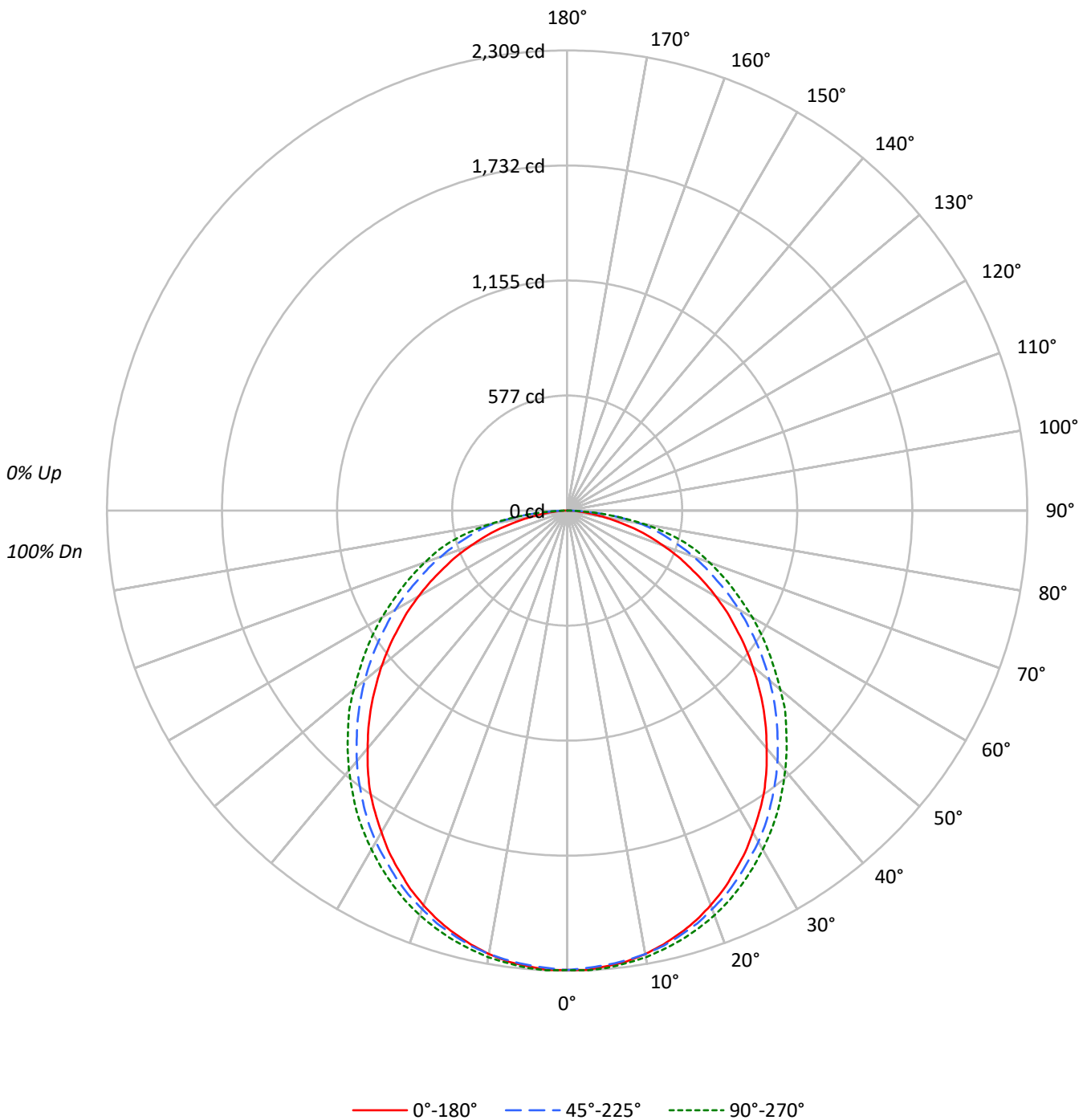
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	3101	3101	3101
5°	3099	3091	3110
10°	3087	3087	3110
15°	3057	3072	3103
20°	3017	3047	3095
25°	2961	3017	3076
30°	2895	2982	3050
35°	2831	2934	3026
40°	2735	2885	2991
45°	2645	2828	2958
50°	2543	2775	2923
55°	2430	2723	2894
60°	2316	2681	2888
65°	2170	2634	2906
70°	2009	2648	2985
75°	1799	2698	3153
80°	1454	2858	3085
85°	1095	2510	2445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	218.2	3.3
10°-20°	623.6	9.5
20°-30°	937.3	14.3
30°-40°	1116.5	17.0
40°-50°	1142.7	17.4
50°-60°	1028.8	15.7
60°-70°	807.9	12.3
70°-80°	524.4	8.0
80°-90°	162.2	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°	1779.1	27.1
0°-40°	2895.7	44.1
0°-60°	5067.2	77.2
0°-90°	6561.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6561.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2305	2305	2305	2305	2305	
5°	2295	2299	2288	2301	2303	218
15°	2195	2201	2205	2224	2228	619
25°	1995	2011	2032	2065	2072	919
35°	1724	1744	1786	1830	1842	1075
45°	1390	1424	1486	1542	1555	1072
55°	1036	1082	1161	1221	1234	929
65°	682	734	827	896	913	678
75°	346	413	519	590	606	366
85°	71	131	163	158	158	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2305.1	2305.1	2305.1	2305.1	2305.1
2.5°	2307.2	2307.2	2296.8	2307.2	2309.3
5°	2294.7	2298.9	2288.5	2301.0	2303.0
7.5°	2282.2	2282.2	2276.0	2288.5	2290.5
10°	2259.3	2261.4	2259.3	2273.9	2276.0
12.5°	2230.1	2234.3	2236.4	2250.9	2253.0
15°	2194.7	2200.9	2205.1	2223.8	2228.0
17.5°	2155.1	2161.3	2171.7	2192.6	2196.8
20°	2107.1	2115.5	2128.0	2155.1	2161.3
22.5°	2055.0	2063.4	2084.2	2109.2	2119.6
25°	1994.6	2011.3	2032.1	2065.4	2071.7
27.5°	1934.1	1948.7	1975.8	2011.3	2019.6
30°	1863.3	1886.2	1919.6	1955.0	1963.3
32.5°	1794.5	1817.4	1857.0	1894.5	1905.0
35°	1723.6	1744.5	1786.2	1829.9	1842.4
37.5°	1642.4	1669.4	1715.3	1759.1	1771.6
40°	1556.9	1590.2	1642.4	1688.2	1702.8
42.5°	1475.6	1511.1	1563.2	1613.2	1629.8
45°	1390.2	1423.5	1486.0	1542.3	1554.8
47.5°	1302.6	1340.1	1406.8	1463.1	1484.0
50°	1215.1	1254.7	1325.6	1383.9	1396.4
52.5°	1127.6	1169.2	1244.3	1306.8	1313.1
55°	1035.9	1081.7	1160.9	1221.3	1233.9
57.5°	952.5	992.1	1077.5	1140.1	1154.7
60°	860.8	904.5	996.3	1054.6	1073.4
62.5°	773.2	819.1	915.0	973.3	990.0
65°	681.5	733.6	827.4	896.2	912.9
67.5°	602.3	652.4	752.4	819.1	835.8
70°	510.6	566.9	673.2	742.0	758.7
72.5°	431.4	489.8	596.1	662.8	687.8
75°	346.0	412.7	519.0	589.8	606.5
77.5°	262.6	339.7	448.1	502.3	502.3
80°	187.6	268.9	368.9	393.9	398.1
82.5°	123.0	202.2	273.0	270.9	270.9
85°	70.9	131.3	162.6	158.4	158.4
87.5°	27.1	54.2	58.4	58.4	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)