

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: P389599

Luminaire Tested: **24CZ2-130VHE-S-UNV-L950-CD2-SWPD1-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: P389599  
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: 24CZ2-130VHE-S-UNV-L950-CD2-SWPD1-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: 12486.5 lumens  
Efficiency: N/A  
Efficacy: 137.7 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

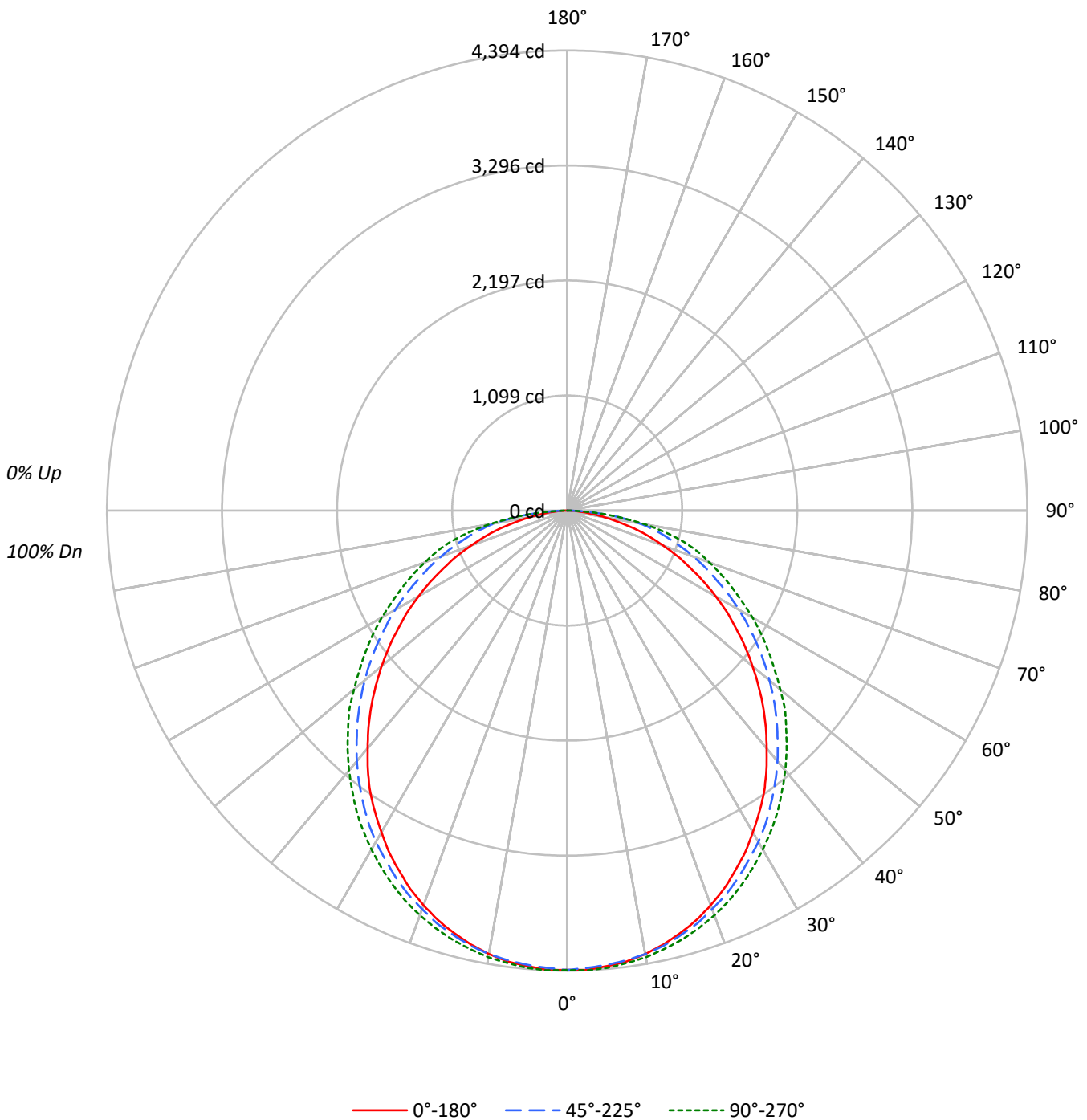
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	5902	5902	5902
5°	5898	5882	5919
10°	5874	5874	5917
15°	5818	5845	5906
20°	5741	5798	5889
25°	5635	5741	5853
30°	5509	5675	5805
35°	5388	5583	5759
40°	5204	5489	5691
45°	5034	5381	5630
50°	4840	5280	5562
55°	4624	5182	5508
60°	4408	5102	5497
65°	4129	5013	5531
70°	3823	5040	5679
75°	3423	5134	6000
80°	2766	5439	5869
85°	2081	4776	4653



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	415.3	3.3
10°-20°	1186.6	9.5
20°-30°	1783.7	14.3
30°-40°	2124.7	17.0
40°-50°	2174.6	17.4
50°-60°	1957.7	15.7
60°-70°	1537.5	12.3
70°-80°	997.8	8.0
80°-90°	308.6	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°	3385.6	27.1
0°-40°	5510.3	44.1
0°-60°	9642.6	77.2
0°-90°	12486.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12486.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4387	4387	4387	4387	4387	
5°	4367	4375	4355	4379	4383	415
15°	4176	4188	4196	4232	4240	1178
25°	3796	3827	3867	3930	3942	1749
35°	3280	3320	3399	3482	3506	2046
45°	2645	2709	2828	2935	2959	2040
55°	1971	2058	2209	2324	2348	1767
65°	1297	1396	1575	1706	1737	1291
75°	658	785	988	1122	1154	697
85°	135	250	309	301	301	163
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4386.6	4386.6	4386.6	4386.6	4386.6
2.5°	4390.6	4390.6	4370.7	4390.6	4394.5
5°	4366.8	4374.7	4354.9	4378.7	4382.6
7.5°	4343.0	4343.0	4331.1	4354.9	4358.8
10°	4299.3	4303.3	4299.3	4327.1	4331.1
12.5°	4243.8	4251.7	4255.7	4283.5	4287.4
15°	4176.4	4188.3	4196.2	4231.9	4239.8
17.5°	4101.0	4112.9	4132.8	4172.4	4180.3
20°	4009.8	4025.7	4049.5	4101.0	4112.9
22.5°	3910.6	3926.5	3966.2	4013.8	4033.6
25°	3795.6	3827.4	3867.0	3930.5	3942.4
27.5°	3680.6	3708.4	3759.9	3827.4	3843.2
30°	3545.8	3589.4	3652.8	3720.3	3736.1
32.5°	3414.9	3458.5	3533.9	3605.3	3625.1
35°	3280.0	3319.7	3399.0	3482.3	3506.1
37.5°	3125.3	3176.9	3264.2	3347.5	3371.2
40°	2962.7	3026.2	3125.3	3212.6	3240.4
42.5°	2808.1	2875.5	2974.6	3069.8	3101.5
45°	2645.4	2708.9	2827.9	2935.0	2958.8
47.5°	2478.9	2550.3	2677.2	2784.3	2823.9
50°	2312.3	2387.6	2522.5	2633.5	2657.3
52.5°	2145.7	2225.0	2367.8	2486.8	2498.7
55°	1971.2	2058.4	2209.2	2324.2	2348.0
57.5°	1812.5	1887.9	2050.5	2169.5	2197.3
60°	1638.0	1721.3	1895.8	2006.9	2042.6
62.5°	1471.5	1558.7	1741.2	1852.2	1883.9
65°	1296.9	1396.1	1574.6	1705.5	1737.2
67.5°	1146.2	1241.4	1431.8	1558.7	1590.4
70°	971.7	1078.8	1281.1	1412.0	1443.7
72.5°	821.0	932.1	1134.3	1261.2	1308.8
75°	658.4	785.3	987.6	1122.4	1154.2
77.5°	499.7	646.5	852.7	955.8	955.8
80°	357.0	511.6	702.0	749.6	757.5
82.5°	234.0	384.7	519.6	515.6	515.6
85°	134.8	249.9	309.4	301.4	301.4
87.5°	51.6	103.1	111.1	111.1	107.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)