

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: P391349

Luminaire Tested: **24CZ2-40VHE-RDP-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: P391349  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40VHE-RDP-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2322.2 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

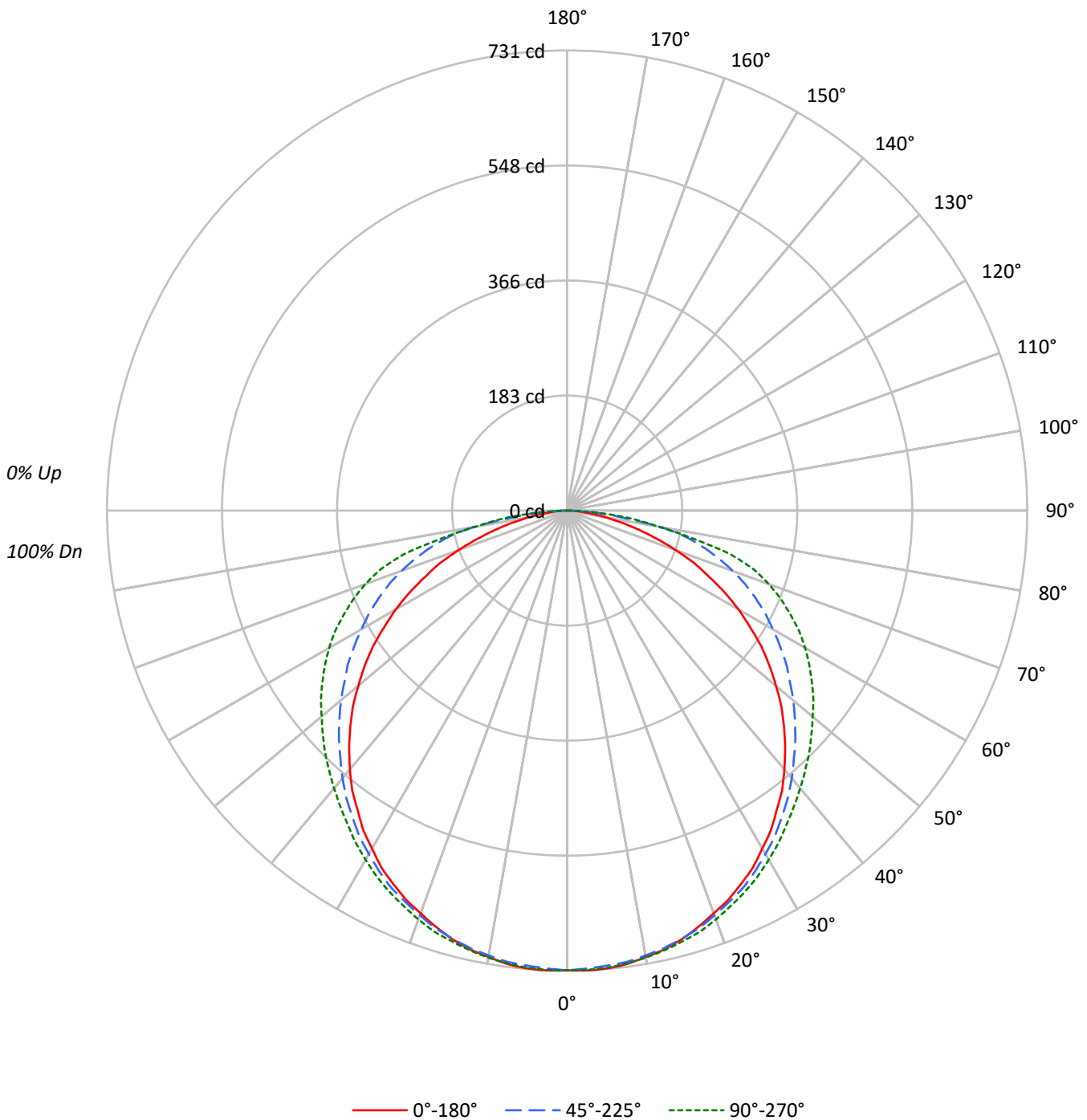
Input Watts (W): 26.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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		88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		34	28	24	22

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

	0°	45°	90°
0°	983	983	983
5°	986	980	985
10°	984	980	985
15°	982	980	987
20°	975	980	990
25°	971	982	992
30°	963	979	995
35°	953	976	999
40°	943	975	1012
45°	927	975	1035
50°	907	981	1066
55°	884	997	1113
60°	846	1017	1175
65°	792	1053	1247
70°	720	1101	1341
75°	611	1162	1401
80°	482	1169	1134
85°	355	889	996



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.3	3.0
10°-20°	199.4	8.6
20°-30°	304.9	13.1
30°-40°	372.7	16.0
40°-50°	397.2	17.1
50°-60°	379.8	16.4
60°-70°	321.7	13.9
70°-80°	216.2	9.3
80°-90°	61.0	2.6
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°	573.5	24.7
0°-40°	946.2	40.7
0°-60°	1723.2	74.2
0°-90°	2322.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2322.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	730	729	726	729	729	69
15°	705	705	704	710	708	199
25°	654	656	661	667	668	302
35°	580	585	594	606	608	364
45°	487	495	513	534	544	376
55°	377	390	425	458	475	335
65°	249	274	331	374	392	247
75°	118	160	224	262	270	126
85°	23	47	58	62	64	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	730.3	730.3	730.3	730.3	730.3
2.5°	731.4	731.4	728.0	730.3	730.3
5°	730.3	729.1	725.7	729.1	729.1
7.5°	726.8	725.7	723.4	726.8	725.7
10°	719.9	719.9	717.6	721.1	721.1
12.5°	714.1	713.0	711.8	716.4	715.3
15°	704.9	704.9	703.8	709.5	708.4
17.5°	693.4	694.6	695.7	700.3	701.5
20°	680.7	683.0	684.2	691.1	691.1
22.5°	669.2	670.4	672.7	679.6	679.6
25°	654.2	656.5	661.2	666.9	668.1
27.5°	639.3	640.4	646.2	654.2	655.4
30°	619.7	623.1	630.1	639.3	640.4
32.5°	602.4	605.9	613.9	623.1	625.4
35°	580.5	585.1	594.3	605.9	608.2
37.5°	560.9	564.4	575.9	588.6	592.0
40°	536.8	543.7	555.2	570.2	575.9
42.5°	512.6	519.5	533.3	552.9	559.8
45°	487.2	495.3	512.6	534.5	543.7
47.5°	461.9	471.1	490.7	516.0	526.4
50°	433.1	444.6	468.8	497.6	509.1
52.5°	405.4	419.3	445.8	478.0	493.0
55°	376.7	390.5	425.0	458.4	474.6
57.5°	344.4	362.8	400.8	438.9	456.1
60°	314.5	331.7	377.8	419.3	436.5
62.5°	282.2	305.2	354.8	398.5	415.8
65°	248.8	274.1	330.6	374.3	391.6
67.5°	218.8	246.5	306.4	350.2	367.4
70°	183.1	217.7	279.9	323.7	340.9
72.5°	149.7	187.7	252.3	294.9	311.0
75°	117.5	160.1	223.5	261.5	269.5
77.5°	87.5	132.5	193.5	209.6	203.9
80°	62.2	106.0	150.9	142.8	146.3
82.5°	40.3	80.6	93.3	106.0	109.4
85°	23.0	47.2	57.6	62.2	64.5
87.5°	10.4	17.3	23.0	23.0	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)