

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: P391251

Luminaire Tested: **24CZ2-30VHE-RDP-UNV-L940-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: P391251  
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: 24CZ2-30VHE-RDP-UNV-L940-CD1-SDWPD1-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: 1687.8 lumens  
Efficiency: N/A  
Efficacy: 82.7 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

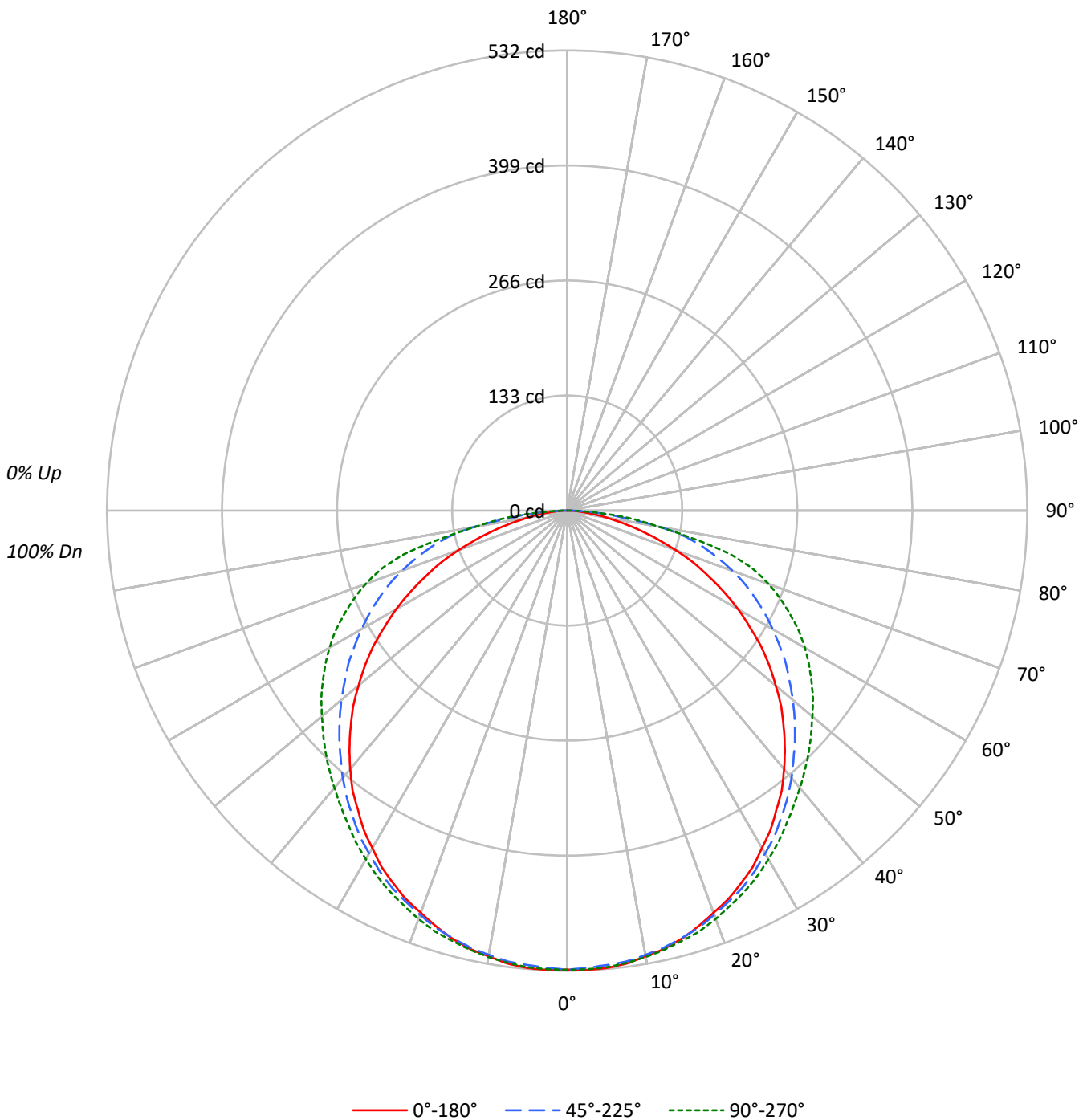
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20				20			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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82	82	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67	67	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56	56	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47	47	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40	40	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35	35	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31	31	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27	27	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24	24	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22	22	22

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

	0°	45°	90°
0°	714	714	714
5°	717	712	716
10°	715	713	716
15°	714	712	717
20°	708	712	719
25°	706	713	721
30°	700	711	723
35°	693	710	726
40°	685	709	735
45°	674	709	752
50°	659	713	774
55°	642	725	809
60°	615	739	854
65°	576	765	906
70°	524	800	975
75°	444	844	1018
80°	350	850	824
85°	258	647	724



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.3	3.0
10°-20°	144.9	8.6
20°-30°	221.6	13.1
30°-40°	270.9	16.0
40°-50°	288.7	17.1
50°-60°	276.0	16.4
60°-70°	233.8	13.9
70°-80°	157.2	9.3
80°-90°	44.3	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°	416.8	24.7
0°-40°	687.7	40.7
0°-60°	1252.5	74.2
0°-90°	1687.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1687.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	531	530	527	530	530	50
15°	512	512	512	516	515	144
25°	476	477	480	485	486	219
35°	422	425	432	440	442	264
45°	354	360	372	388	395	273
55°	274	284	309	333	345	244
65°	181	199	240	272	285	180
75°	85	116	162	190	196	91
85°	17	34	42	45	47	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	530.8	530.8	530.8	530.8	530.8
2.5°	531.6	531.6	529.1	530.8	530.8
5°	530.8	529.9	527.4	529.9	529.9
7.5°	528.3	527.4	525.7	528.3	527.4
10°	523.2	523.2	521.6	524.1	524.1
12.5°	519.0	518.2	517.4	520.7	519.9
15°	512.3	512.3	511.5	515.7	514.9
17.5°	504.0	504.8	505.6	509.0	509.8
20°	494.8	496.4	497.3	502.3	502.3
22.5°	486.4	487.2	488.9	493.9	493.9
25°	475.5	477.2	480.5	484.7	485.6
27.5°	464.6	465.5	469.7	475.5	476.3
30°	450.4	452.9	457.9	464.6	465.5
32.5°	437.8	440.4	446.2	452.9	454.6
35°	421.9	425.3	432.0	440.4	442.0
37.5°	407.7	410.2	418.6	427.8	430.3
40°	390.1	395.1	403.5	414.4	418.6
42.5°	372.5	377.6	387.6	401.8	406.9
45°	354.1	360.0	372.5	388.4	395.1
47.5°	335.7	342.4	356.6	375.1	382.6
50°	314.8	323.1	340.7	361.7	370.0
52.5°	294.7	304.7	324.0	347.4	358.3
55°	273.8	283.8	308.9	333.2	344.9
57.5°	250.3	263.7	291.3	319.0	331.5
60°	228.5	241.1	274.6	304.7	317.3
62.5°	205.1	221.8	257.8	289.7	302.2
65°	180.8	199.2	240.3	272.1	284.6
67.5°	159.1	179.2	222.7	254.5	267.1
70°	133.1	158.2	203.4	235.2	247.8
72.5°	108.8	136.5	183.3	214.3	226.0
75°	85.4	116.4	162.4	190.0	195.9
77.5°	63.6	96.3	140.6	152.4	148.2
80°	45.2	77.0	109.7	103.8	106.3
82.5°	29.3	58.6	67.8	77.0	79.5
85°	16.7	34.3	41.9	45.2	46.9
87.5°	7.5	12.6	16.7	16.7	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)