

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: P391390

Luminaire Tested: **24CZ2-45VHE-RDP-UNV-L930-CD1-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: P391390  
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: 24CZ2-45VHE-RDP-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2498.5 lumens  
Efficiency: N/A  
Efficacy: 84.4 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

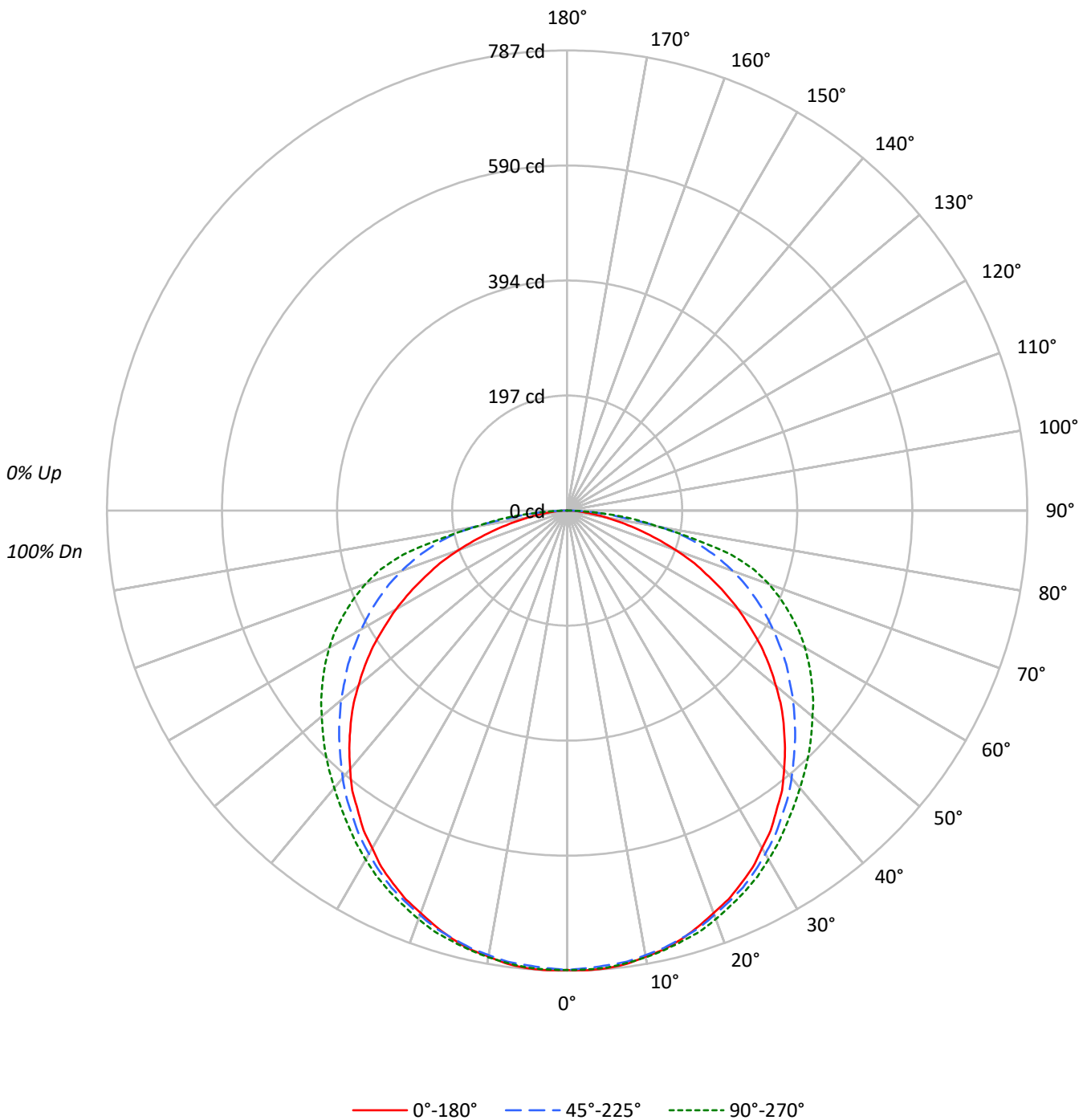
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1057	1057	1057
5°	1061	1054	1060
10°	1058	1055	1060
15°	1056	1055	1062
20°	1049	1054	1065
25°	1045	1056	1067
30°	1036	1053	1070
35°	1026	1050	1075
40°	1014	1049	1088
45°	997	1049	1113
50°	975	1056	1147
55°	951	1073	1198
60°	910	1094	1264
65°	852	1132	1342
70°	775	1185	1443
75°	657	1250	1508
80°	518	1258	1220
85°	383	957	1071



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.5	3.0
10°-20°	214.5	8.6
20°-30°	328.0	13.1
30°-40°	401.0	16.0
40°-50°	427.4	17.1
50°-60°	408.6	16.4
60°-70°	346.2	13.9
70°-80°	232.6	9.3
80°-90°	65.6	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°	617.0	24.7
0°-40°	1018.0	40.7
0°-60°	1854.1	74.2
0°-90°	2498.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2498.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	786	786	786	786	786	
5°	786	784	781	784	784	75
15°	758	758	757	763	762	214
25°	704	706	711	718	719	324
35°	625	630	640	652	654	391
45°	524	533	552	575	585	404
55°	405	420	457	493	511	361
65°	268	295	356	403	421	266
75°	126	172	240	281	290	135
85°	25	51	62	67	69	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	785.7	785.7	785.7	785.7	785.7
2.5°	786.9	786.9	783.2	785.7	785.7
5°	785.7	784.5	780.7	784.5	784.5
7.5°	782.0	780.7	778.3	782.0	780.7
10°	774.6	774.6	772.1	775.8	775.8
12.5°	768.4	767.1	765.9	770.8	769.6
15°	758.4	758.4	757.2	763.4	762.2
17.5°	746.0	747.3	748.5	753.5	754.7
20°	732.4	734.9	736.1	743.6	743.6
22.5°	720.0	721.3	723.7	731.2	731.2
25°	703.9	706.4	711.3	717.5	718.8
27.5°	687.8	689.0	695.2	703.9	705.2
30°	666.7	670.5	677.9	687.8	689.0
32.5°	648.1	651.9	660.5	670.5	672.9
35°	624.6	629.6	639.5	651.9	654.3
37.5°	603.5	607.2	619.6	633.3	637.0
40°	577.5	584.9	597.3	613.4	619.6
42.5°	551.5	558.9	573.8	594.9	602.3
45°	524.2	532.9	551.5	575.0	584.9
47.5°	497.0	506.9	527.9	555.2	566.4
50°	466.0	478.4	504.4	535.4	547.8
52.5°	436.2	451.1	479.6	514.3	530.4
55°	405.2	420.1	457.3	493.2	510.6
57.5°	370.5	390.4	431.3	472.2	490.8
60°	338.3	356.9	406.5	451.1	469.7
62.5°	303.6	328.4	381.7	428.8	447.4
65°	267.7	294.9	355.7	402.8	421.4
67.5°	235.5	265.2	329.6	376.7	395.3
70°	197.0	234.2	301.1	348.2	366.8
72.5°	161.1	202.0	271.4	317.3	334.6
75°	126.4	172.3	240.4	281.3	290.0
77.5°	94.2	142.5	208.2	225.5	219.4
80°	66.9	114.0	162.3	153.7	157.4
82.5°	43.4	86.7	100.4	114.0	117.7
85°	24.8	50.8	62.0	66.9	69.4
87.5°	11.2	18.6	24.8	24.8	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)