

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: P391393

Luminaire Tested: **24CZ2-45VHE-RDP-UNV-L935-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: P391393  
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-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2560.3 lumens  
Efficiency: N/A  
Efficacy: 86.5 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

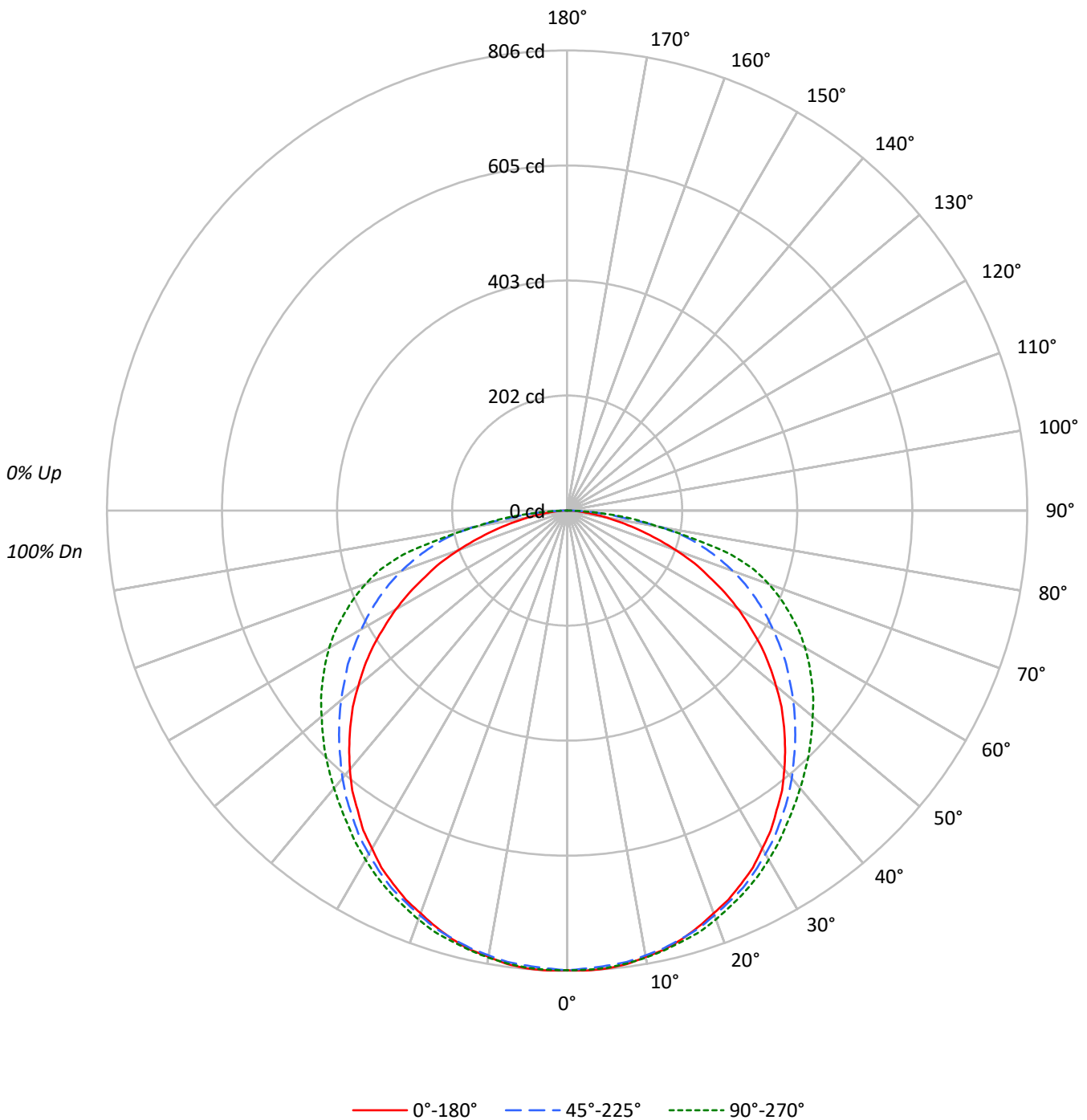
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1083	1083	1083
5°	1087	1081	1086
10°	1084	1081	1086
15°	1083	1081	1088
20°	1075	1080	1091
25°	1071	1082	1094
30°	1061	1079	1097
35°	1051	1076	1101
40°	1039	1075	1115
45°	1022	1075	1141
50°	1000	1082	1175
55°	974	1099	1227
60°	933	1121	1295
65°	873	1160	1375
70°	794	1214	1479
75°	673	1281	1545
80°	532	1289	1250
85°	392	980	1098



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	3.0
10°-20°	219.8	8.6
20°-30°	336.1	13.1
30°-40°	410.9	16.0
40°-50°	438.0	17.1
50°-60°	418.7	16.4
60°-70°	354.7	13.9
70°-80°	238.4	9.3
80°-90°	67.2	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°	632.3	24.7
0°-40°	1043.2	40.7
0°-60°	1899.9	74.2
0°-90°	2560.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2560.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	805	804	800	804	804	76
15°	777	777	776	782	781	219
25°	721	724	729	735	737	332
35°	640	645	655	668	670	401
45°	537	546	565	589	599	414
55°	415	430	469	505	523	370
65°	274	302	364	413	432	272
75°	130	176	246	288	297	139
85°	25	52	64	69	71	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	805.1	805.1	805.1	805.1	805.1
2.5°	806.4	806.4	802.6	805.1	805.1
5°	805.1	803.9	800.1	803.9	803.9
7.5°	801.3	800.1	797.5	801.3	800.1
10°	793.7	793.7	791.2	795.0	795.0
12.5°	787.4	786.1	784.8	789.9	788.6
15°	777.2	777.2	775.9	782.3	781.0
17.5°	764.5	765.8	767.0	772.1	773.4
20°	750.5	753.1	754.3	762.0	762.0
22.5°	737.8	739.1	741.6	749.3	749.3
25°	721.3	723.9	728.9	735.3	736.6
27.5°	704.8	706.1	712.4	721.3	722.6
30°	683.2	687.0	694.7	704.8	706.1
32.5°	664.2	668.0	676.9	687.0	689.6
35°	640.0	645.1	655.3	668.0	670.5
37.5°	618.5	622.3	635.0	648.9	652.7
40°	591.8	599.4	612.1	628.6	635.0
42.5°	565.1	572.7	588.0	609.6	617.2
45°	537.2	546.1	565.1	589.3	599.4
47.5°	509.2	519.4	541.0	568.9	580.4
50°	477.5	490.2	516.9	548.6	561.3
52.5°	447.0	462.3	491.5	527.0	543.5
55°	415.3	430.5	468.6	505.4	523.2
57.5°	379.7	400.0	441.9	483.8	502.9
60°	346.7	365.7	416.5	462.3	481.3
62.5°	311.1	336.5	391.1	439.4	458.4
65°	274.3	302.2	364.5	412.7	431.8
67.5°	241.3	271.8	337.8	386.1	405.1
70°	201.9	240.0	308.6	356.9	375.9
72.5°	165.1	207.0	278.1	325.1	342.9
75°	129.5	176.5	246.4	288.3	297.2
77.5°	96.5	146.0	213.3	231.1	224.8
80°	68.6	116.8	166.4	157.5	161.3
82.5°	44.4	88.9	102.9	116.8	120.6
85°	25.4	52.1	63.5	68.6	71.1
87.5°	11.4	19.0	25.4	25.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)