

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: P391395

Luminaire Tested: **24CZ2-45VHE-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: P391395  
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-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: 2555.6 lumens  
Efficiency: N/A  
Efficacy: 86.3 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

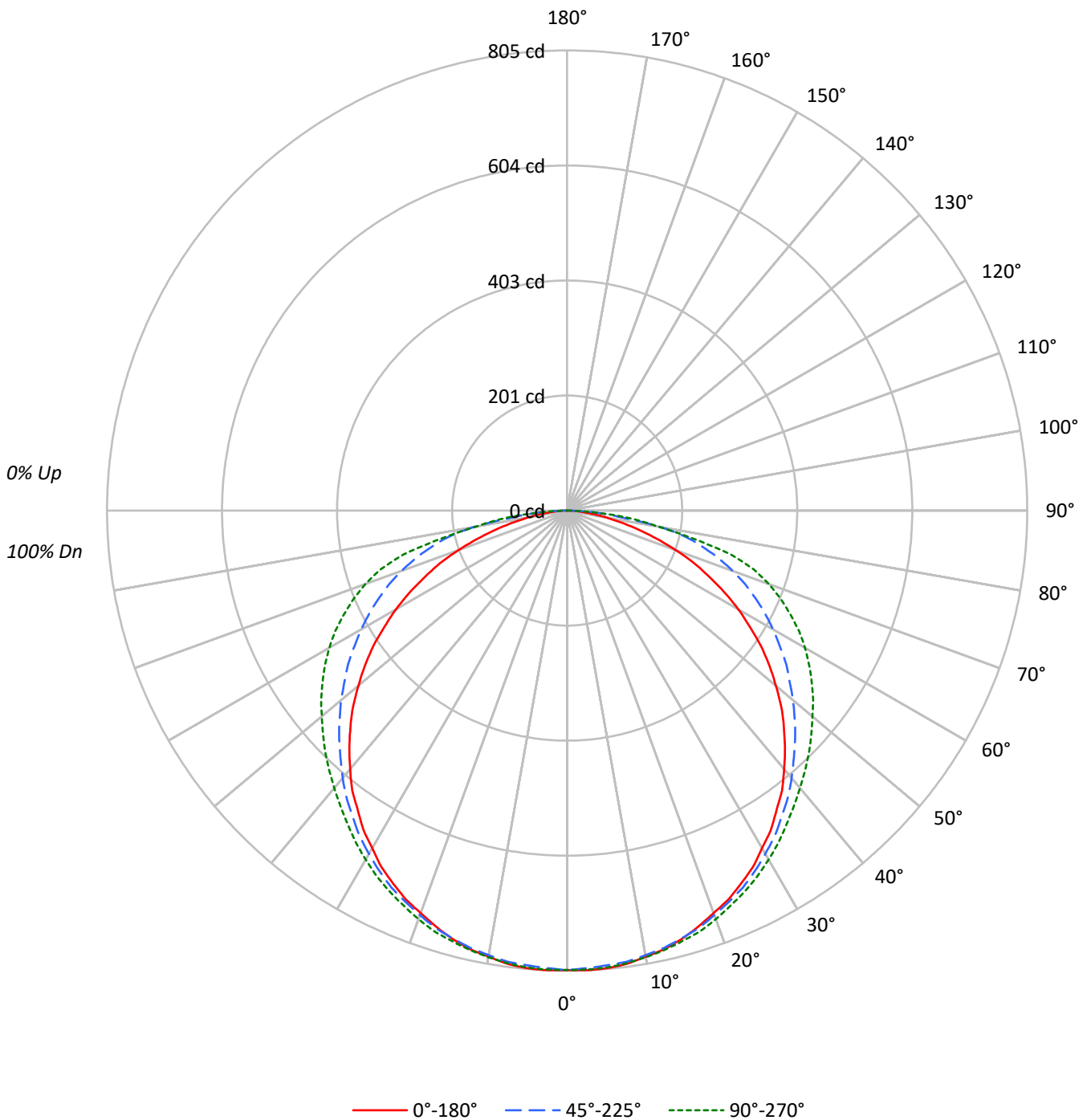
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1081	1081	1081
5°	1086	1079	1084
10°	1082	1079	1084
15°	1081	1079	1086
20°	1073	1078	1089
25°	1069	1080	1091
30°	1060	1077	1095
35°	1049	1074	1099
40°	1038	1073	1113
45°	1020	1073	1138
50°	998	1080	1173
55°	972	1097	1225
60°	931	1119	1293
65°	872	1158	1372
70°	793	1212	1476
75°	672	1278	1542
80°	531	1287	1247
85°	392	979	1096



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.2	3.0
10°-20°	219.4	8.6
20°-30°	335.5	13.1
30°-40°	410.2	16.0
40°-50°	437.2	17.1
50°-60°	418.0	16.4
60°-70°	354.1	13.9
70°-80°	238.0	9.3
80°-90°	67.1	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°	631.2	24.7
0°-40°	1041.3	40.7
0°-60°	1896.4	74.2
0°-90°	2555.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2555.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	804	802	799	802	802	76
15°	776	776	774	781	780	219
25°	720	722	728	734	735	332
35°	639	644	654	667	669	400
45°	536	545	564	588	598	414
55°	414	430	468	504	522	369
65°	274	302	364	412	431	272
75°	129	176	246	288	297	138
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	803.7	803.7	803.7	803.7	803.7
2.5°	804.9	804.9	801.1	803.7	803.7
5°	803.7	802.4	798.6	802.4	802.4
7.5°	799.9	798.6	796.1	799.9	798.6
10°	792.3	792.3	789.7	793.5	793.5
12.5°	785.9	784.6	783.4	788.5	787.2
15°	775.8	775.8	774.5	780.8	779.6
17.5°	763.1	764.4	765.6	770.7	772.0
20°	749.2	751.7	753.0	760.6	760.6
22.5°	736.5	737.7	740.3	747.9	747.9
25°	720.0	722.5	727.6	733.9	735.2
27.5°	703.5	704.8	711.1	720.0	721.3
30°	682.0	685.8	693.4	703.5	704.8
32.5°	663.0	666.8	675.6	685.8	688.3
35°	638.9	643.9	654.1	666.8	669.3
37.5°	617.3	621.1	633.8	647.7	651.6
40°	590.7	598.3	611.0	627.5	633.8
42.5°	564.1	571.7	586.9	608.5	616.1
45°	536.2	545.1	564.1	588.2	598.3
47.5°	508.3	518.5	540.0	567.9	579.3
50°	476.6	489.3	515.9	547.6	560.3
52.5°	446.2	461.4	490.6	526.1	542.5
55°	414.5	429.7	467.7	504.5	522.3
57.5°	379.0	399.3	441.1	483.0	502.0
60°	346.1	365.1	415.8	461.4	480.4
62.5°	310.6	335.9	390.4	438.6	457.6
65°	273.8	301.7	363.8	412.0	431.0
67.5°	240.8	271.3	337.2	385.4	404.4
70°	201.5	239.6	308.0	356.2	375.2
72.5°	164.8	206.6	277.6	324.5	342.3
75°	129.3	176.2	245.9	287.7	296.6
77.5°	96.3	145.8	213.0	230.7	224.4
80°	68.5	116.6	166.1	157.2	161.0
82.5°	44.4	88.7	102.7	116.6	120.4
85°	25.4	52.0	63.4	68.5	71.0
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)