

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: P230036

Luminaire Tested: **24CZ-LD5-40-S-UNV-L930-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230036  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-40-S-UNV-L930-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3349.0 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

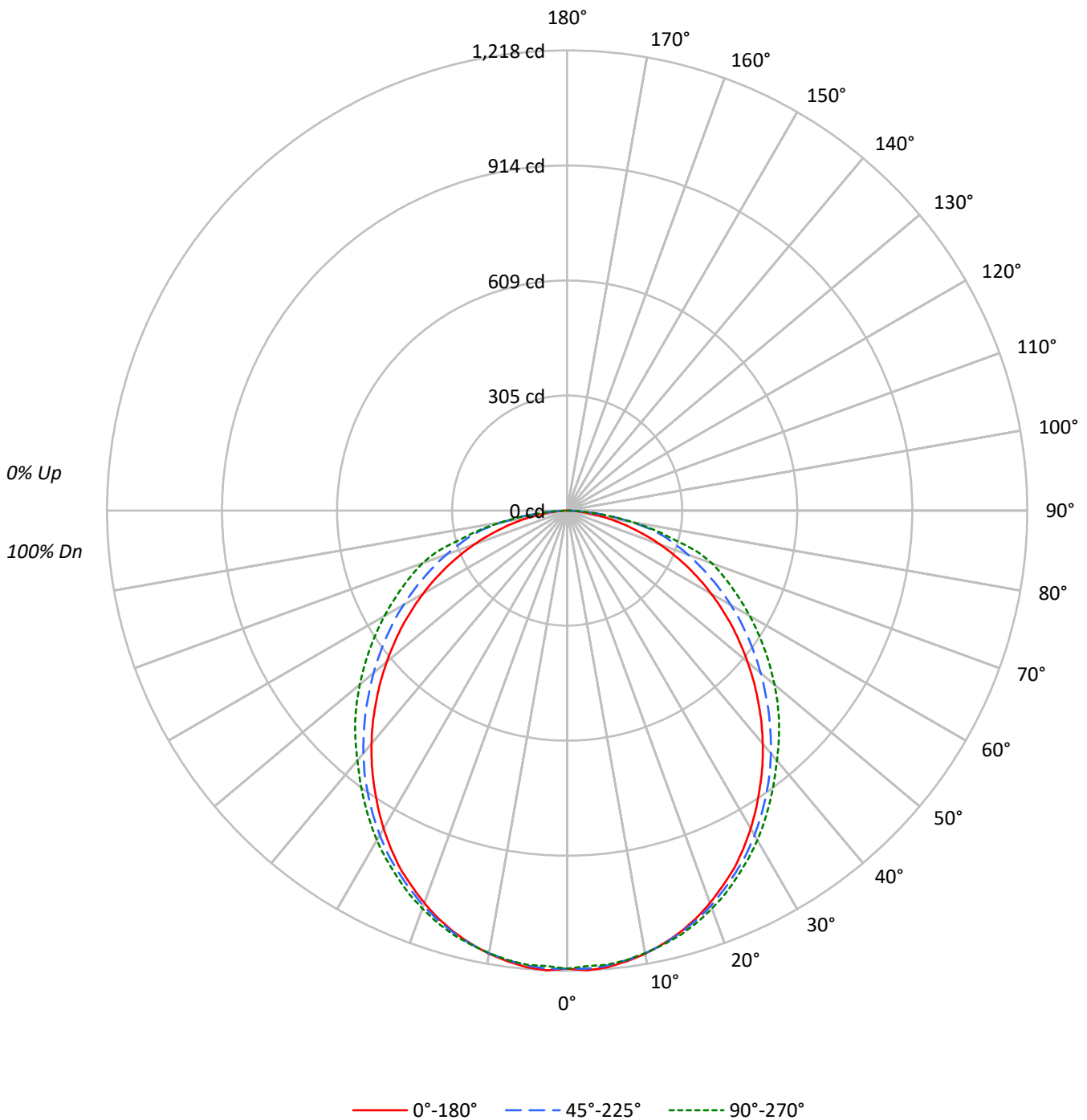
Input Watts (W): 29.04  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	1631	1631	1631
5°	1639	1633	1630
10°	1627	1626	1624
15°	1610	1613	1619
20°	1583	1594	1605
25°	1552	1568	1585
30°	1510	1541	1565
35°	1463	1508	1539
40°	1415	1474	1517
45°	1361	1435	1510
50°	1306	1400	1500
55°	1250	1370	1495
60°	1185	1346	1502
65°	1114	1330	1533
70°	1026	1337	1604
75°	910	1384	1495
80°	760	1313	1347
85°	568	1050	963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.6	3.4
10°-20°	326.0	9.7
20°-30°	485.8	14.5
30°-40°	571.9	17.1
40°-50°	581.2	17.4
50°-60°	522.5	15.6
60°-70°	412.8	12.3
70°-80°	261.9	7.8
80°-90°	72.3	2.2
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°	926.5	27.7
0°-40°	1498.4	44.7
0°-60°	2602.0	77.7
0°-90°	3349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3349.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1212	1212	1212	1212	1212	
5°	1214	1204	1209	1207	1207	115
15°	1156	1150	1158	1161	1162	326
25°	1045	1044	1056	1063	1068	481
35°	890	896	918	928	937	557
45°	715	725	754	777	793	552
55°	533	546	584	622	637	476
65°	350	368	418	464	481	347
75°	175	205	266	290	288	186
85°	37	64	68	62	62	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1212.4	1212.4	1212.4	1212.4	1212.4
2.5°	1218.0	1209.1	1213.5	1211.3	1206.8
5°	1213.5	1203.5	1209.1	1206.8	1206.8
7.5°	1203.5	1195.7	1200.1	1199.0	1200.1
10°	1191.2	1183.4	1190.1	1190.1	1189.0
12.5°	1174.5	1167.8	1175.6	1175.6	1176.7
15°	1155.6	1150.0	1157.8	1161.1	1162.3
17.5°	1132.2	1126.6	1136.6	1140.0	1143.3
20°	1105.4	1103.2	1113.2	1116.6	1121.0
22.5°	1075.3	1075.3	1085.4	1089.8	1096.5
25°	1045.2	1044.1	1056.4	1063.1	1067.5
27.5°	1009.6	1010.7	1026.3	1033.0	1038.6
30°	971.7	973.9	991.8	999.6	1007.4
32.5°	931.6	936.0	956.1	965.0	972.8
35°	890.4	895.9	918.2	928.2	937.2
37.5°	849.1	856.9	880.3	890.4	900.4
40°	805.7	812.4	839.1	851.4	863.6
42.5°	761.1	770.0	796.8	814.6	829.1
45°	715.4	725.4	754.4	776.7	793.4
47.5°	669.7	683.1	710.9	741.0	755.5
50°	624.0	637.4	668.6	702.0	716.5
52.5°	577.2	590.6	626.3	660.8	676.4
55°	532.7	546.0	583.9	621.8	637.4
57.5°	485.9	500.3	542.7	581.7	597.3
60°	440.2	454.6	500.3	541.6	558.3
62.5°	395.6	411.2	459.1	502.6	519.3
65°	349.9	367.7	417.9	463.6	481.4
67.5°	305.3	325.4	377.8	425.7	444.6
70°	260.8	284.2	339.9	388.9	407.8
72.5°	217.3	242.9	302.0	351.0	361.0
75°	175.0	205.0	266.3	289.7	287.5
77.5°	134.8	168.3	226.2	230.7	237.4
80°	98.1	134.8	169.4	178.3	173.8
82.5°	64.6	101.4	121.5	117.0	115.9
85°	36.8	63.5	68.0	62.4	62.4
87.5°	15.6	25.6	22.3	16.7	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)