

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: P391533

Luminaire Tested: **24CZ2-60VHE-RDP-UNV-L930-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: P391533  
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: 24CZ2-60VHE-RDP-UNV-L930-CD1-SDWPD1-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: 3278.3 lumens  
Efficiency: N/A  
Efficacy: 84.7 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

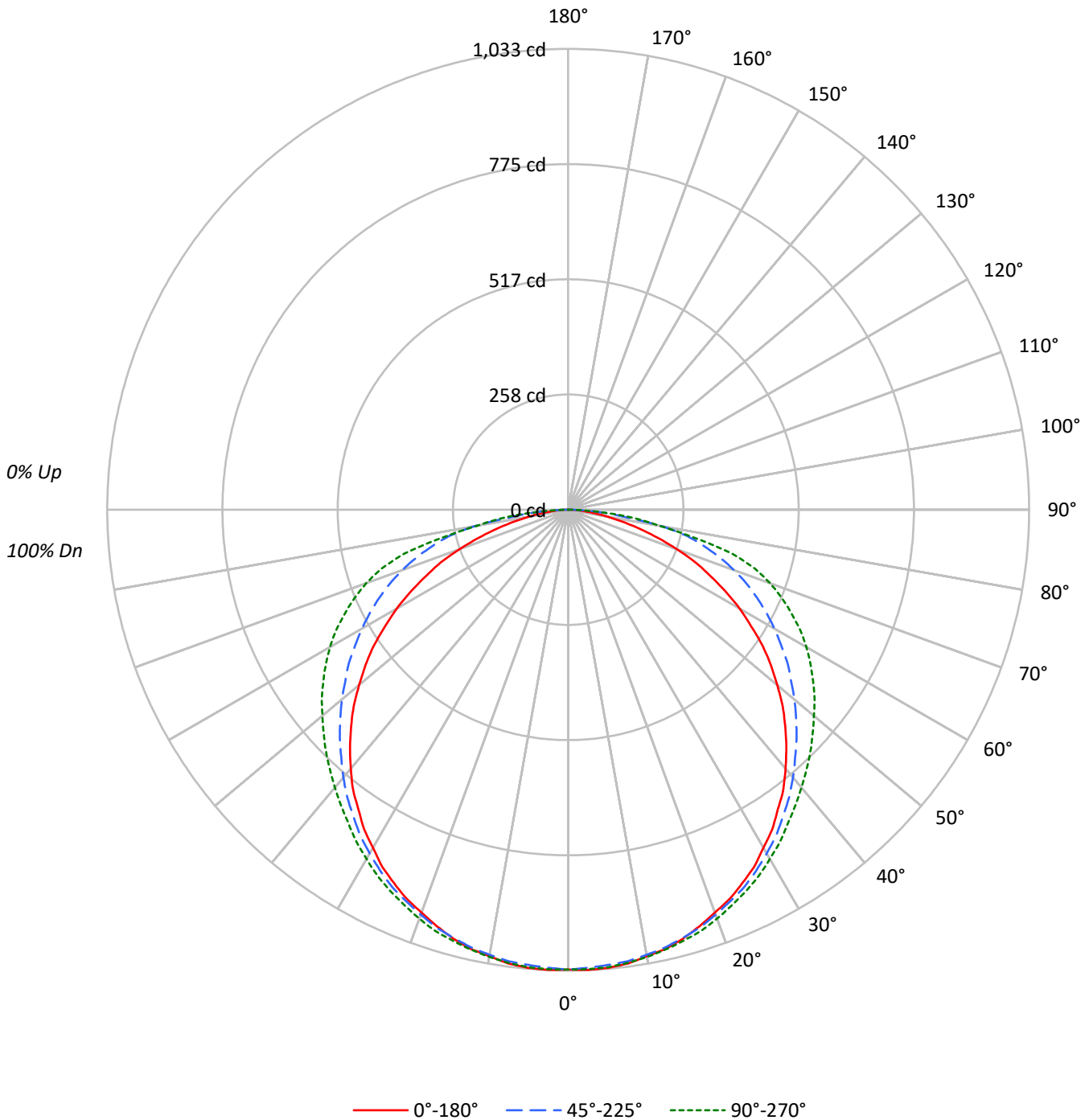
Input Watts (W): 38.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1387	1387	1387
5°	1392	1384	1390
10°	1389	1384	1391
15°	1386	1384	1393
20°	1376	1383	1397
25°	1371	1386	1400
30°	1359	1382	1405
35°	1346	1378	1410
40°	1331	1377	1428
45°	1309	1377	1460
50°	1280	1385	1504
55°	1247	1407	1571
60°	1195	1435	1658
65°	1118	1486	1760
70°	1017	1554	1893
75°	862	1640	1978
80°	680	1650	1600
85°	502	1255	1406



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.8	3.0
10°-20°	281.4	8.6
20°-30°	430.4	13.1
30°-40°	526.1	16.0
40°-50°	560.8	17.1
50°-60°	536.2	16.4
60°-70°	454.2	13.9
70°-80°	305.3	9.3
80°-90°	86.1	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°	809.6	24.7
0°-40°	1335.8	40.7
0°-60°	2432.7	74.2
0°-90°	3278.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3278.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1031	1031	1031	1031	1031	
5°	1031	1029	1024	1029	1029	98
15°	995	995	994	1002	1000	281
25°	924	927	933	942	943	426
35°	820	826	839	855	859	513
45°	688	699	724	754	768	531
55°	532	551	600	647	670	474
65°	351	387	467	528	553	349
75°	166	226	316	369	380	178
85°	32	67	81	88	91	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1030.9	1030.9	1030.9	1030.9	1030.9
2.5°	1032.6	1032.6	1027.7	1030.9	1030.9
5°	1030.9	1029.3	1024.4	1029.3	1029.3
7.5°	1026.1	1024.4	1021.2	1026.1	1024.4
10°	1016.3	1016.3	1013.0	1017.9	1017.9
12.5°	1008.2	1006.5	1004.9	1011.4	1009.8
15°	995.2	995.2	993.5	1001.7	1000.0
17.5°	978.9	980.5	982.1	988.7	990.3
20°	961.0	964.3	965.9	975.6	975.6
22.5°	944.7	946.4	949.6	959.4	959.4
25°	923.6	926.9	933.4	941.5	943.1
27.5°	902.5	904.1	912.2	923.6	925.2
30°	874.8	879.7	889.5	902.5	904.1
32.5°	850.4	855.3	866.7	879.7	883.0
35°	819.5	826.0	839.1	855.3	858.6
37.5°	791.9	796.8	813.0	830.9	835.8
40°	757.8	767.5	783.8	804.9	813.0
42.5°	723.6	733.4	752.9	780.5	790.3
45°	687.8	699.2	723.6	754.5	767.5
47.5°	652.1	665.1	692.7	728.5	743.1
50°	611.4	627.7	661.8	702.5	718.7
52.5°	572.4	591.9	629.3	674.8	696.0
55°	531.7	551.2	600.0	647.2	669.9
57.5°	486.2	512.2	565.9	619.5	643.9
60°	443.9	468.3	533.4	591.9	616.3
62.5°	398.4	430.9	500.8	562.6	587.0
65°	351.2	387.0	466.7	528.5	552.9
67.5°	309.0	348.0	432.5	494.3	518.7
70°	258.5	307.3	395.1	456.9	481.3
72.5°	211.4	265.1	356.1	416.3	439.0
75°	165.9	226.0	315.5	369.1	380.5
77.5°	123.6	187.0	273.2	295.9	287.8
80°	87.8	149.6	213.0	201.6	206.5
82.5°	56.9	113.8	131.7	149.6	154.5
85°	32.5	66.7	81.3	87.8	91.1
87.5°	14.6	24.4	32.5	32.5	30.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)