

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: P391630

Luminaire Tested: **24CZ2-70VHE-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: P391630  
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: 24CZ2-70VHE-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: 3868.5 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

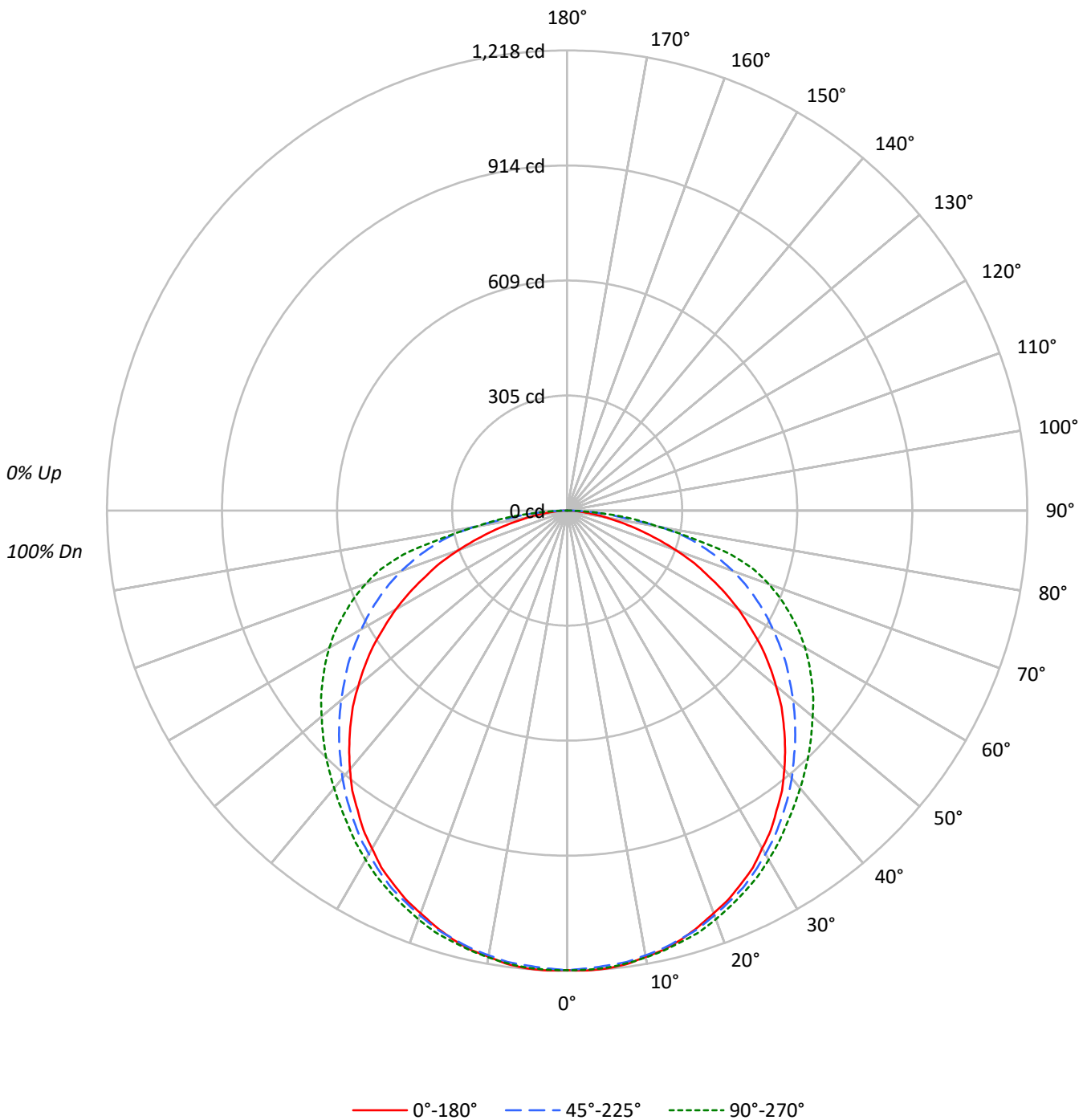
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1637	1637	1637
5°	1643	1633	1640
10°	1639	1633	1641
15°	1636	1633	1644
20°	1624	1632	1648
25°	1618	1635	1652
30°	1604	1631	1658
35°	1588	1626	1664
40°	1571	1625	1685
45°	1545	1625	1723
50°	1510	1635	1775
55°	1472	1661	1855
60°	1410	1694	1957
65°	1320	1753	2077
70°	1200	1834	2234
75°	1017	1935	2334
80°	803	1948	1888
85°	593	1480	1660



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.4	3.0
10°-20°	332.1	8.6
20°-30°	507.9	13.1
30°-40°	620.9	16.0
40°-50°	661.7	17.1
50°-60°	632.7	16.4
60°-70°	536.0	13.9
70°-80°	360.2	9.3
80°-90°	101.6	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°	955.4	24.7
0°-40°	1576.3	40.7
0°-60°	2870.7	74.2
0°-90°	3868.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3868.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1216	1215	1209	1215	1215	116
15°	1174	1174	1172	1182	1180	331
25°	1090	1094	1101	1111	1113	502
35°	967	975	990	1009	1013	606
45°	812	825	854	890	906	626
55°	628	650	708	764	791	559
65°	414	457	551	624	652	411
75°	196	267	372	436	449	210
85°	38	79	96	104	108	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1216.5	1216.5	1216.5	1216.5	1216.5
2.5°	1218.5	1218.5	1212.7	1216.5	1216.5
5°	1216.5	1214.6	1208.9	1214.6	1214.6
7.5°	1210.8	1208.9	1205.0	1210.8	1208.9
10°	1199.3	1199.3	1195.4	1201.2	1201.2
12.5°	1189.7	1187.8	1185.8	1193.5	1191.6
15°	1174.3	1174.3	1172.4	1182.0	1180.1
17.5°	1155.1	1157.0	1159.0	1166.6	1168.6
20°	1134.0	1137.9	1139.8	1151.3	1151.3
22.5°	1114.8	1116.8	1120.6	1132.1	1132.1
25°	1089.9	1093.7	1101.4	1111.0	1112.9
27.5°	1064.9	1066.9	1076.5	1089.9	1091.8
30°	1032.3	1038.1	1049.6	1064.9	1066.9
32.5°	1003.5	1009.3	1022.7	1038.1	1041.9
35°	967.1	974.8	990.1	1009.3	1013.1
37.5°	934.5	940.2	959.4	980.5	986.3
40°	894.2	905.7	924.9	949.8	959.4
42.5°	853.9	865.4	888.4	921.0	932.5
45°	811.7	825.1	853.9	890.3	905.7
47.5°	769.4	784.8	817.4	859.6	876.9
50°	721.5	740.7	781.0	828.9	848.1
52.5°	675.4	698.5	742.6	796.3	821.3
55°	627.5	650.5	708.0	763.7	790.6
57.5°	573.7	604.4	667.7	731.1	759.9
60°	523.8	552.6	629.4	698.5	727.2
62.5°	470.1	508.5	591.0	663.9	692.7
65°	414.5	456.7	550.7	623.6	652.4
67.5°	364.6	410.6	510.4	583.3	612.1
70°	305.1	362.7	466.3	539.2	568.0
72.5°	249.4	312.8	420.2	491.2	518.1
75°	195.7	266.7	372.3	435.6	449.0
77.5°	145.8	220.7	322.4	349.2	339.6
80°	103.6	176.5	251.4	237.9	243.7
82.5°	67.2	134.3	155.4	176.5	182.3
85°	38.4	78.7	95.9	103.6	107.5
87.5°	17.3	28.8	38.4	38.4	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)