

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: P391583

Luminaire Tested: **24CZ2-65VHE-RDP-UNV-L930-CD1-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: P391583  
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: 24CZ2-65VHE-RDP-UNV-L930-CD1-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: 3643.0 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

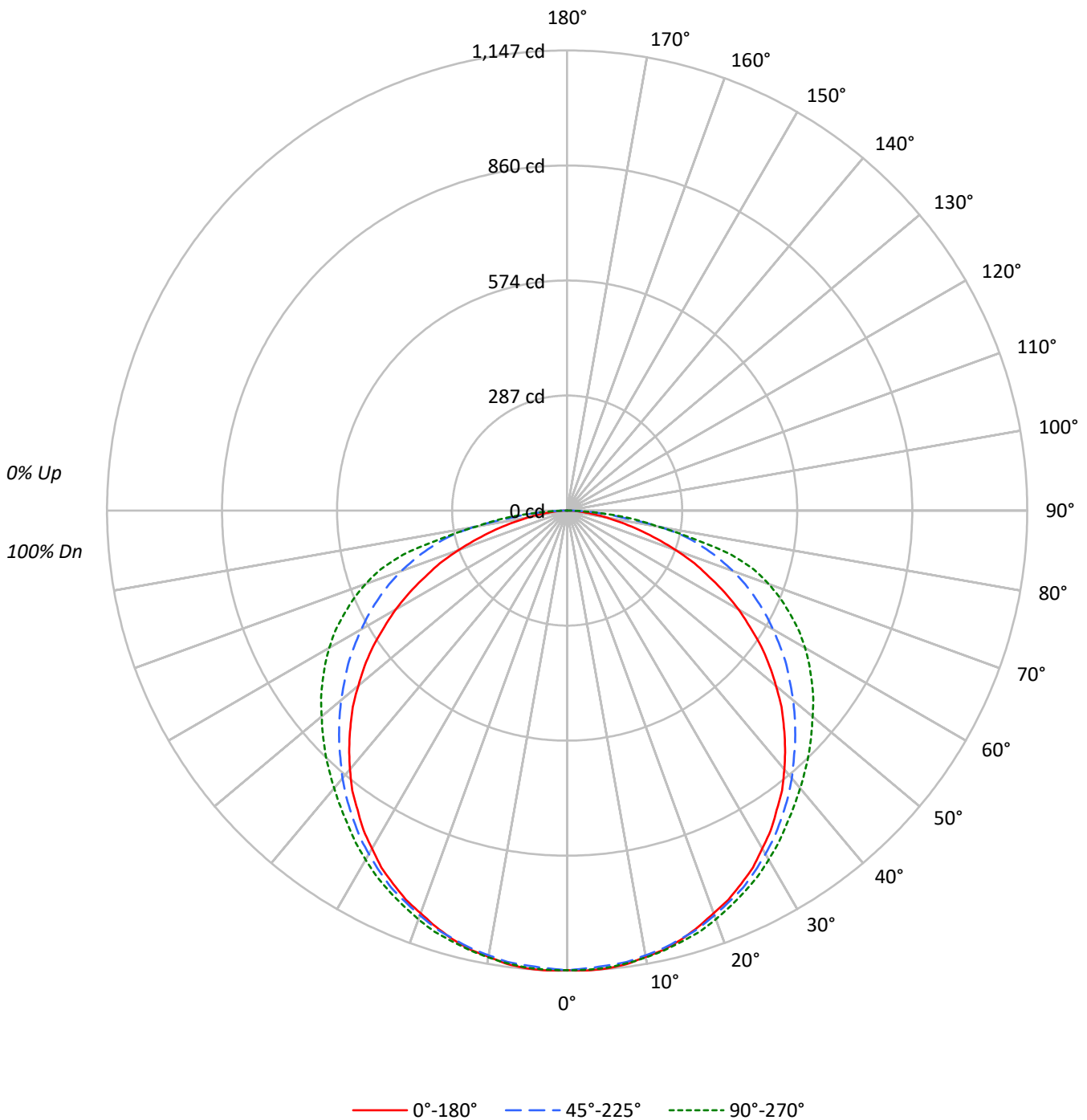
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1541	1541	1541
5°	1547	1538	1545
10°	1543	1538	1545
15°	1540	1538	1548
20°	1529	1537	1552
25°	1524	1540	1556
30°	1510	1536	1561
35°	1496	1532	1567
40°	1479	1530	1587
45°	1454	1530	1623
50°	1422	1539	1672
55°	1386	1564	1746
60°	1327	1595	1843
65°	1243	1651	1956
70°	1130	1727	2104
75°	958	1823	2198
80°	756	1834	1778
85°	557	1394	1562



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.7	3.0
10°-20°	312.8	8.6
20°-30°	478.3	13.1
30°-40°	584.7	16.0
40°-50°	623.1	17.1
50°-60°	595.8	16.4
60°-70°	504.7	13.9
70°-80°	339.2	9.3
80°-90°	95.7	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°	899.7	24.7
0°-40°	1484.4	40.7
0°-60°	2703.4	74.2
0°-90°	3643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3643.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1146	1146	1146	1146	1146	
5°	1146	1144	1138	1144	1144	109
15°	1106	1106	1104	1113	1111	312
25°	1026	1030	1037	1046	1048	473
35°	911	918	932	950	954	571
45°	764	777	804	838	853	590
55°	591	613	667	719	744	526
65°	390	430	519	587	614	387
75°	184	251	351	410	423	197
85°	36	74	90	98	101	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1145.6	1145.6	1145.6	1145.6	1145.6
2.5°	1147.4	1147.4	1142.0	1145.6	1145.6
5°	1145.6	1143.8	1138.4	1143.8	1143.8
7.5°	1140.2	1138.4	1134.8	1140.2	1138.4
10°	1129.4	1129.4	1125.7	1131.2	1131.2
12.5°	1120.3	1118.5	1116.7	1123.9	1122.1
15°	1105.9	1105.9	1104.1	1113.1	1111.3
17.5°	1087.8	1089.6	1091.4	1098.6	1100.4
20°	1067.9	1071.5	1073.3	1084.2	1084.2
22.5°	1049.9	1051.7	1055.3	1066.1	1066.1
25°	1026.4	1030.0	1037.2	1046.2	1048.0
27.5°	1002.9	1004.7	1013.7	1026.4	1028.2
30°	972.2	977.6	988.4	1002.9	1004.7
32.5°	945.0	950.5	963.1	977.6	981.2
35°	910.7	917.9	932.4	950.5	954.1
37.5°	880.0	885.4	903.5	923.4	928.8
40°	842.0	852.9	871.0	894.5	903.5
42.5°	804.1	814.9	836.6	867.3	878.2
45°	764.3	777.0	804.1	838.4	852.9
47.5°	724.6	739.1	769.8	809.5	825.8
50°	679.4	697.5	735.4	780.6	798.7
52.5°	636.1	657.7	699.3	749.9	773.4
55°	590.9	612.6	666.8	719.2	744.5
57.5°	540.3	569.2	628.8	688.5	715.6
60°	493.3	520.4	592.7	657.7	684.8
62.5°	442.7	478.8	556.5	625.2	652.3
65°	390.3	430.1	518.6	587.3	614.4
67.5°	343.3	386.7	480.7	549.3	576.4
70°	287.3	341.5	439.1	507.8	534.9
72.5°	234.9	294.5	395.7	462.6	487.9
75°	184.3	251.2	350.6	410.2	422.8
77.5°	137.3	207.8	303.6	328.9	319.8
80°	97.6	166.2	236.7	224.1	229.5
82.5°	63.2	126.5	146.4	166.2	171.7
85°	36.1	74.1	90.3	97.6	101.2
87.5°	16.3	27.1	36.1	36.1	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)