

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: P391827

Luminaire Tested: **24CZ2-90VHE-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: P391827  
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: 24CZ2-90VHE-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: 5074.7 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

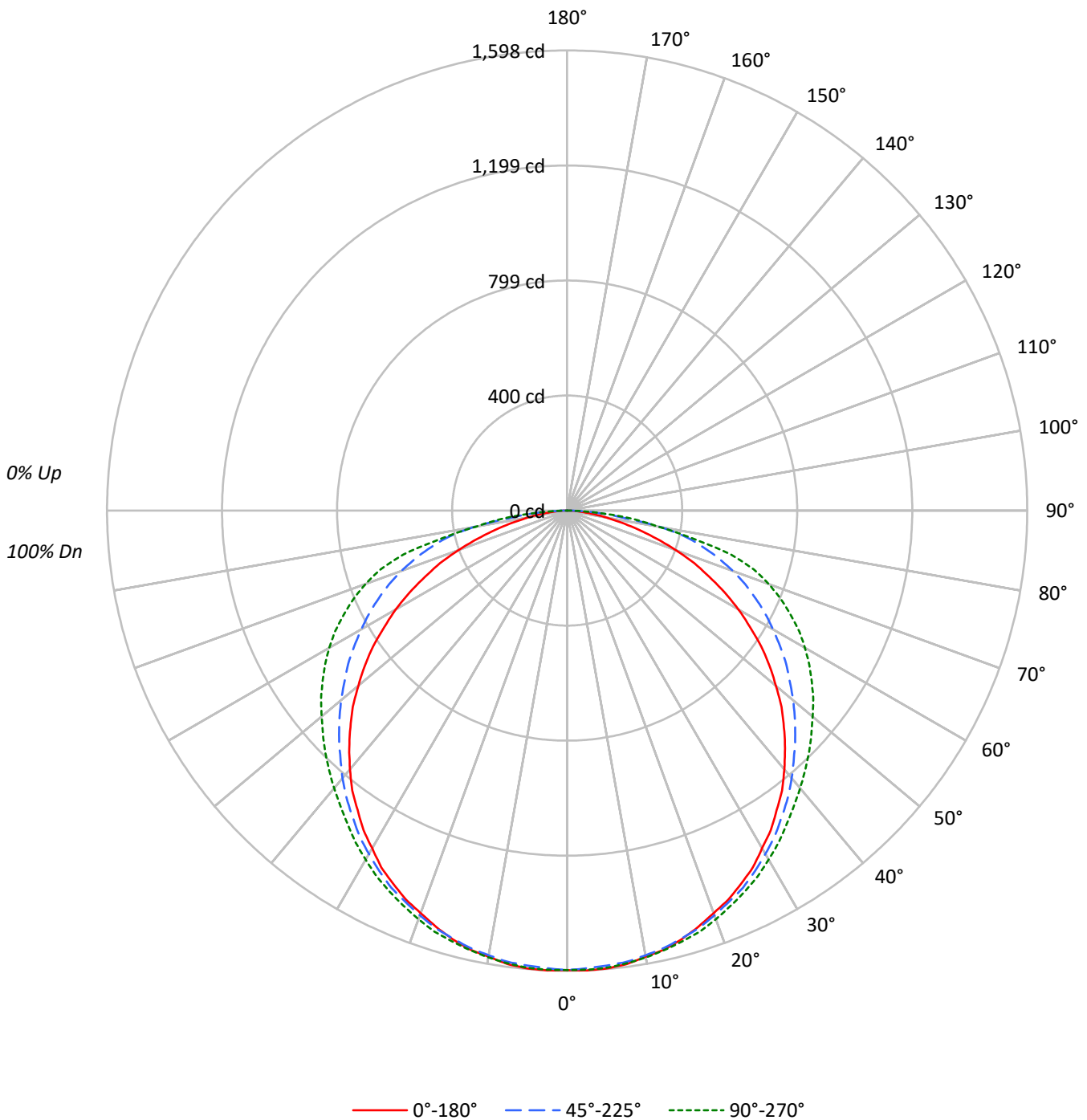
Input Watts (W): 61.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2147	2147	2147
5°	2155	2142	2152
10°	2149	2143	2153
15°	2146	2142	2156
20°	2130	2141	2163
25°	2123	2145	2167
30°	2104	2139	2174
35°	2084	2133	2183
40°	2060	2131	2211
45°	2026	2131	2261
50°	1981	2144	2329
55°	1931	2179	2433
60°	1849	2222	2567
65°	1731	2300	2725
70°	1574	2406	2931
75°	1334	2538	3062
80°	1053	2555	2477
85°	777	1944	2177



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.4	3.0
10°-20°	435.7	8.6
20°-30°	666.2	13.1
30°-40°	814.5	16.0
40°-50°	868.1	17.1
50°-60°	830.0	16.4
60°-70°	703.1	13.9
70°-80°	472.5	9.3
80°-90°	133.3	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°	1253.3	24.7
0°-40°	2067.8	40.7
0°-60°	3765.8	74.2
0°-90°	5074.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5074.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1596	1596	1596	1596	1596	
5°	1596	1593	1586	1593	1593	152
15°	1540	1540	1538	1550	1548	434
25°	1430	1435	1445	1457	1460	659
35°	1269	1279	1299	1324	1329	795
45°	1065	1082	1120	1168	1188	821
55°	823	853	929	1002	1037	733
65°	544	599	722	818	856	540
75°	257	350	488	571	589	275
85°	50	103	126	136	141	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1595.8	1595.8	1595.8	1595.8	1595.8
2.5°	1598.4	1598.4	1590.8	1595.8	1595.8
5°	1595.8	1593.3	1585.8	1593.3	1593.3
7.5°	1588.3	1585.8	1580.7	1588.3	1585.8
10°	1573.2	1573.2	1568.2	1575.7	1575.7
12.5°	1560.6	1558.1	1555.6	1565.6	1563.1
15°	1540.5	1540.5	1538.0	1550.5	1548.0
17.5°	1515.3	1517.8	1520.3	1530.4	1532.9
20°	1487.6	1492.6	1495.2	1510.3	1510.3
22.5°	1462.4	1465.0	1470.0	1485.1	1485.1
25°	1429.7	1434.8	1444.8	1457.4	1459.9
27.5°	1397.0	1399.5	1412.1	1429.7	1432.2
30°	1354.2	1361.8	1376.9	1397.0	1399.5
32.5°	1316.4	1324.0	1341.6	1361.8	1366.8
35°	1268.6	1278.7	1298.8	1324.0	1329.0
37.5°	1225.8	1233.4	1258.6	1286.2	1293.8
40°	1173.0	1188.1	1213.2	1246.0	1258.6
42.5°	1120.1	1135.2	1165.4	1208.2	1223.3
45°	1064.7	1082.4	1120.1	1167.9	1188.1
47.5°	1009.4	1029.5	1072.3	1127.7	1150.3
50°	946.4	971.6	1024.5	1087.4	1112.6
52.5°	886.0	916.2	974.1	1044.6	1077.3
55°	823.1	853.3	928.8	1001.8	1037.0
57.5°	752.6	792.9	876.0	959.0	996.8
60°	687.2	724.9	825.6	916.2	954.0
62.5°	616.7	667.0	775.3	870.9	908.7
65°	543.7	599.1	722.4	818.1	855.8
67.5°	478.3	538.7	669.6	765.2	803.0
70°	400.2	475.7	611.7	707.3	745.1
72.5°	327.2	410.3	551.2	644.4	679.6
75°	256.7	349.9	488.3	571.4	589.0
77.5°	191.3	289.5	422.9	458.1	445.5
80°	135.9	231.6	329.7	312.1	319.7
82.5°	88.1	176.2	203.9	231.6	239.1
85°	50.3	103.2	125.9	135.9	141.0
87.5°	22.7	37.8	50.3	50.3	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)