

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: P391736

Luminaire Tested: **24CZ2-80VHE-RDP-UNV-L950-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: P391736  
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: 24CZ2-80VHE-RDP-UNV-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4956.6 lumens  
Efficiency: N/A  
Efficacy: 92.1 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

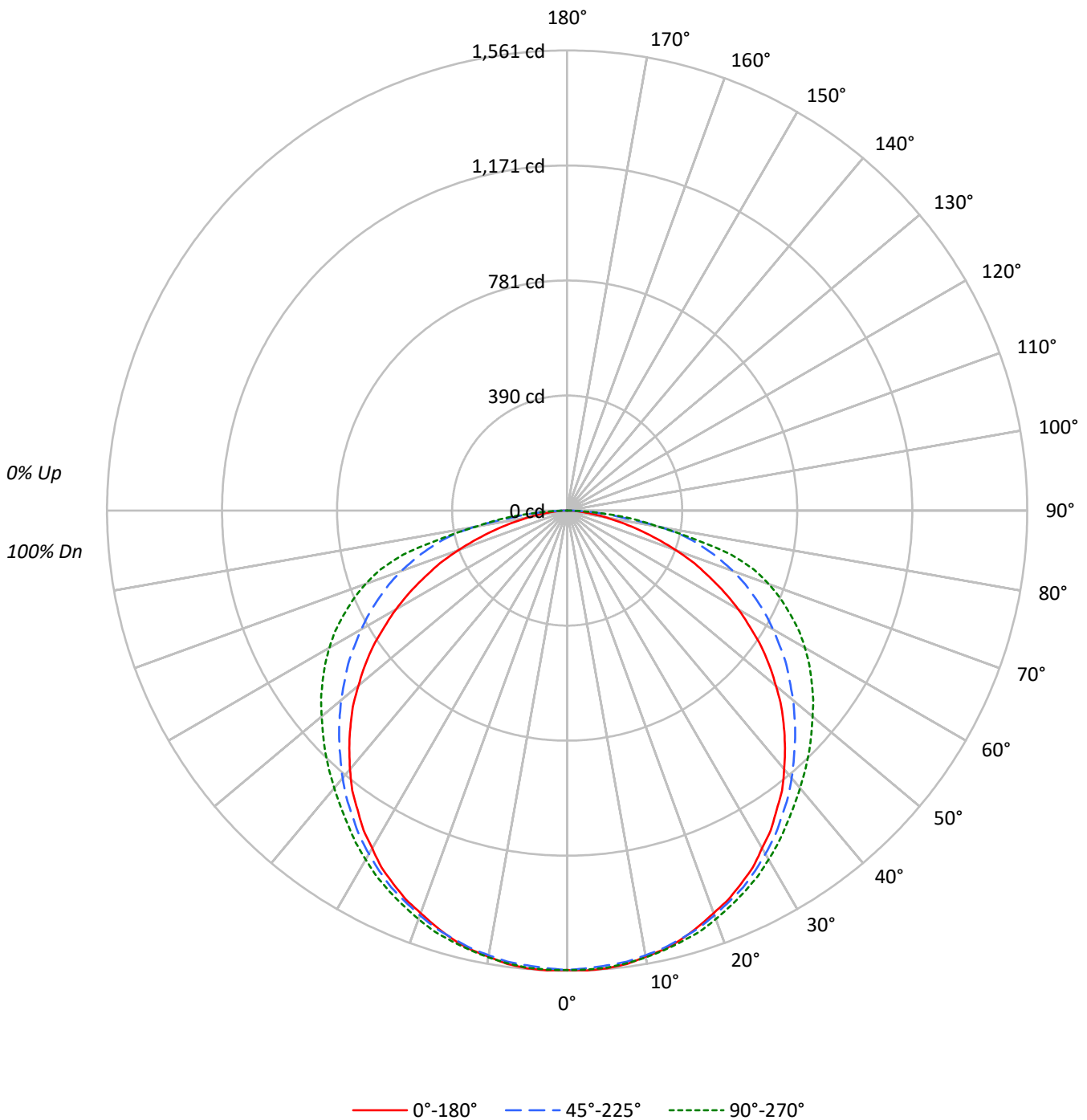
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2097	2097	2097
5°	2105	2092	2102
10°	2099	2093	2103
15°	2096	2092	2106
20°	2080	2091	2112
25°	2073	2095	2117
30°	2055	2089	2124
35°	2035	2084	2132
40°	2012	2081	2159
45°	1979	2082	2208
50°	1935	2094	2275
55°	1886	2128	2376
60°	1806	2170	2507
65°	1691	2246	2661
70°	1538	2350	2863
75°	1304	2480	2991
80°	1029	2496	2419
85°	760	1897	2126



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.9	3.0
10°-20°	425.5	8.6
20°-30°	650.7	13.1
30°-40°	795.5	16.0
40°-50°	847.8	17.1
50°-60°	810.7	16.4
60°-70°	686.7	13.9
70°-80°	461.5	9.3
80°-90°	130.2	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°	1224.1	24.7
0°-40°	2019.6	40.7
0°-60°	3678.1	74.2
0°-90°	4956.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4956.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1559	1559	1559	1559	1559	
5°	1559	1556	1549	1556	1556	148
15°	1505	1505	1502	1514	1512	424
25°	1396	1401	1411	1424	1426	644
35°	1239	1249	1269	1293	1298	776
45°	1040	1057	1094	1141	1160	802
55°	804	833	907	978	1013	716
65°	531	585	706	799	836	527
75°	251	342	477	558	575	269
85°	49	101	123	133	138	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1558.7	1558.7	1558.7	1558.7	1558.7
2.5°	1561.2	1561.2	1553.8	1558.7	1558.7
5°	1558.7	1556.3	1548.9	1556.3	1556.3
7.5°	1551.3	1548.9	1544.0	1551.3	1548.9
10°	1536.6	1536.6	1531.7	1539.0	1539.0
12.5°	1524.3	1521.8	1519.4	1529.2	1526.7
15°	1504.6	1504.6	1502.2	1514.5	1512.0
17.5°	1480.0	1482.5	1485.0	1494.8	1497.2
20°	1453.0	1457.9	1460.4	1475.1	1475.1
22.5°	1428.4	1430.9	1435.8	1450.5	1450.5
25°	1396.4	1401.4	1411.2	1423.5	1425.9
27.5°	1364.5	1366.9	1379.2	1396.4	1398.9
30°	1322.7	1330.1	1344.8	1364.5	1366.9
32.5°	1285.8	1293.2	1310.4	1330.1	1335.0
35°	1239.1	1248.9	1268.6	1293.2	1298.1
37.5°	1197.3	1204.7	1229.3	1256.3	1263.7
40°	1145.7	1160.4	1185.0	1217.0	1229.3
42.5°	1094.0	1108.8	1138.3	1180.1	1194.8
45°	1040.0	1057.2	1094.0	1140.8	1160.4
47.5°	985.9	1005.5	1047.3	1101.4	1123.5
50°	924.4	949.0	1000.6	1062.1	1086.7
52.5°	865.4	894.9	951.5	1020.3	1052.3
55°	803.9	833.4	907.2	978.5	1012.9
57.5°	735.1	774.4	855.6	936.7	973.6
60°	671.2	708.1	806.4	894.9	931.8
62.5°	602.3	651.5	757.2	850.7	887.5
65°	531.0	585.1	705.6	799.0	835.9
67.5°	467.1	526.1	654.0	747.4	784.3
70°	390.9	464.7	597.4	690.8	727.7
72.5°	319.6	400.7	538.4	629.4	663.8
75°	250.8	341.7	477.0	558.1	575.3
77.5°	186.8	282.7	413.0	447.5	435.2
80°	132.8	226.2	322.1	304.9	312.2
82.5°	86.0	172.1	199.1	226.2	233.6
85°	49.2	100.8	122.9	132.8	137.7
87.5°	22.1	36.9	49.2	49.2	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)