

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: P390603

Luminaire Tested: **22CZ2-70VHE-HRP-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: P390603  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-HRP-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4964.3 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

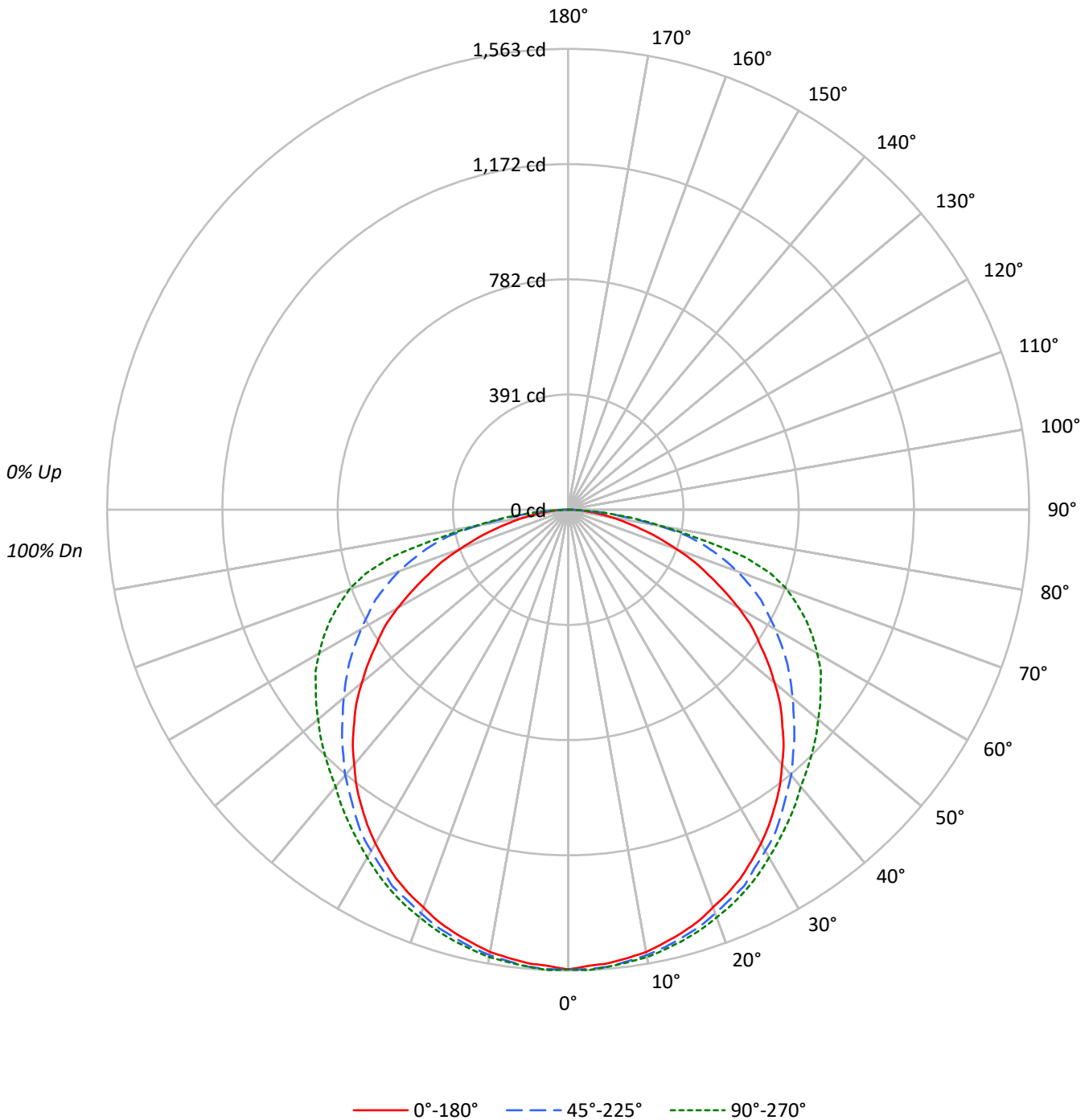
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	4196	4196	4196
5°	4173	4202	4202
10°	4161	4191	4211
15°	4141	4181	4212
20°	4110	4173	4214
25°	4099	4185	4229
30°	4062	4153	4233
35°	4019	4139	4259
40°	3964	4131	4310
45°	3905	4128	4447
50°	3822	4158	4632
55°	3718	4249	4900
60°	3597	4363	5248
65°	3349	4581	5674
70°	3075	4799	6206
75°	2696	5050	6417
80°	2320	4810	5036
85°	2029	3495	3835



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.5	3.0
10°-20°	423.5	8.5
20°-30°	646.2	13.0
30°-40°	789.0	15.9
40°-50°	843.6	17.0
50°-60°	814.3	16.4
60°-70°	700.9	14.1
70°-80°	474.2	9.6
80°-90°	125.1	2.5
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°	1217.2	24.5
0°-40°	2006.1	40.4
0°-60°	3664.0	73.8
0°-90°	4964.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4964.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1559	1559	1559	1559	1559	
5°	1545	1548	1556	1556	1556	147
15°	1486	1490	1501	1508	1512	419
25°	1380	1388	1410	1417	1424	635
35°	1223	1234	1260	1286	1296	766
45°	1026	1044	1085	1139	1169	792
55°	792	818	906	997	1044	710
65°	526	577	719	833	891	523
75°	259	343	486	584	617	278
85°	66	91	113	117	124	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1559.4	1559.4	1559.4	1559.4	1559.4
2.5°	1548.4	1552.1	1559.4	1559.4	1563.0
5°	1544.8	1548.4	1555.7	1555.7	1555.7
7.5°	1533.8	1537.5	1544.8	1548.4	1548.4
10°	1522.9	1526.5	1533.8	1537.5	1541.1
12.5°	1504.6	1508.2	1519.2	1526.5	1526.5
15°	1486.3	1490.0	1500.9	1508.2	1511.9
17.5°	1464.4	1471.7	1482.7	1490.0	1493.6
20°	1435.2	1442.5	1457.1	1468.1	1471.7
22.5°	1409.6	1416.9	1431.6	1442.5	1449.8
25°	1380.4	1387.7	1409.6	1416.9	1424.3
27.5°	1343.9	1351.2	1369.5	1384.1	1395.0
30°	1307.4	1314.7	1336.6	1354.9	1362.2
32.5°	1267.2	1278.2	1303.7	1318.3	1329.3
35°	1223.4	1234.4	1259.9	1285.5	1296.4
37.5°	1179.6	1190.5	1216.1	1249.0	1263.6
40°	1128.4	1143.1	1175.9	1219.7	1227.0
42.5°	1081.0	1099.2	1128.4	1179.6	1197.8
45°	1026.2	1044.5	1084.6	1139.4	1168.6
47.5°	975.1	993.3	1037.1	1102.9	1139.4
50°	913.0	938.5	993.3	1070.0	1106.5
52.5°	854.6	876.5	949.5	1033.5	1077.3
55°	792.5	818.0	905.7	997.0	1044.5
57.5°	737.7	759.6	858.2	960.5	1015.2
60°	668.3	697.5	810.7	920.3	975.1
62.5°	595.3	639.1	763.3	876.5	934.9
65°	525.9	577.0	719.4	832.6	891.1
67.5°	463.8	518.6	664.7	785.2	839.9
70°	390.8	460.1	609.9	726.7	788.8
72.5°	325.0	401.7	547.8	664.7	719.4
75°	259.3	343.3	485.7	584.3	617.2
77.5°	200.9	281.2	416.3	445.5	449.2
80°	149.7	222.8	310.4	314.1	325.0
82.5°	102.3	157.0	200.9	219.1	222.8
85°	65.7	91.3	113.2	116.9	124.2
87.5°	29.2	32.9	40.2	36.5	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)