

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: P391616

Luminaire Tested: **24CZ2-70VHE-HRP-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: P391616
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-HRP-UNV-L950-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5432.9 lumens
Efficiency: N/A
Efficacy: 118.9 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

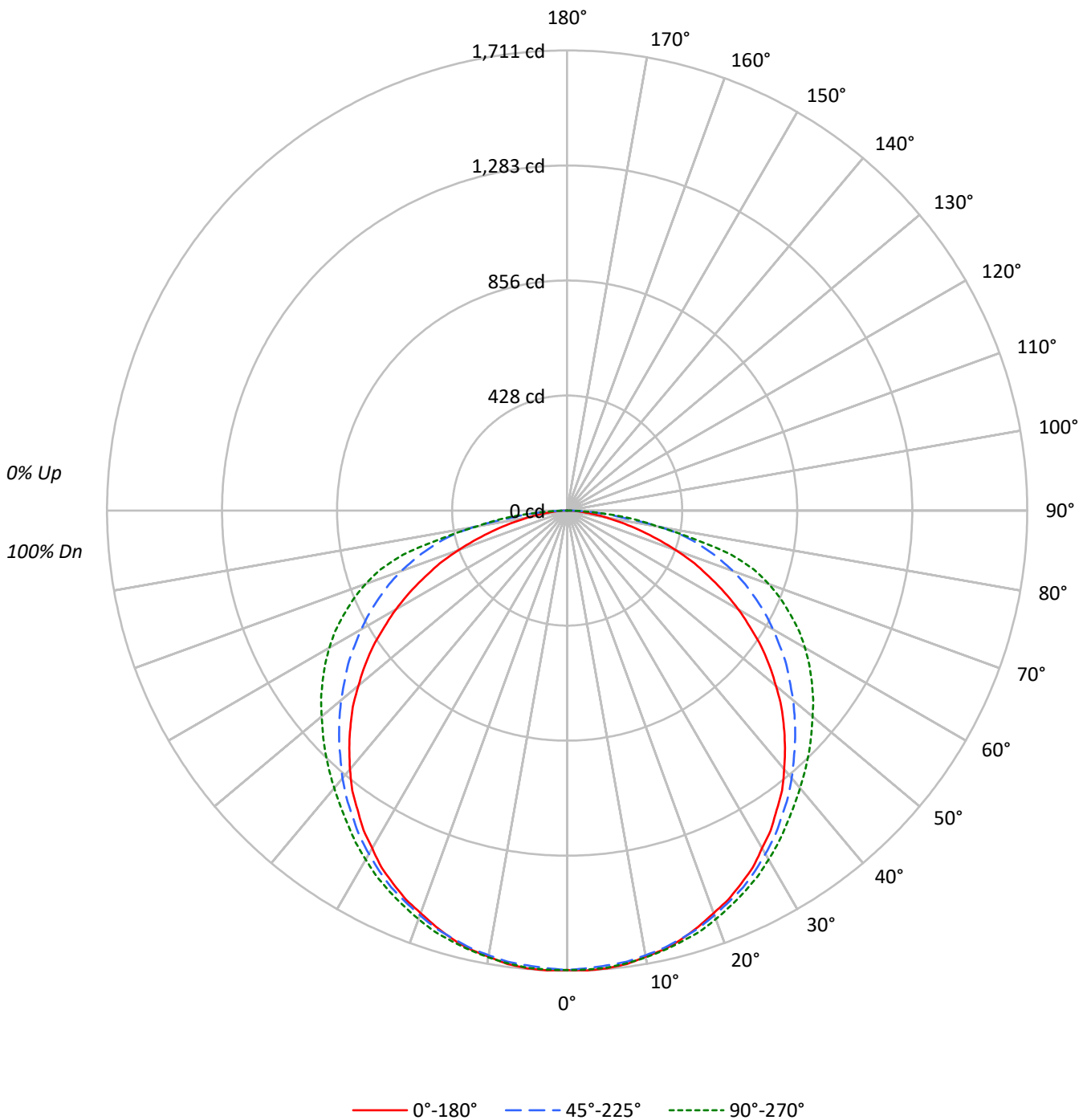
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2299	2299	2299
5°	2308	2293	2304
10°	2301	2294	2305
15°	2297	2293	2309
20°	2280	2292	2315
25°	2272	2296	2320
30°	2252	2290	2328
35°	2231	2284	2337
40°	2206	2281	2367
45°	2169	2282	2420
50°	2121	2296	2493
55°	2067	2333	2605
60°	1980	2379	2748
65°	1853	2462	2917
70°	1686	2576	3138
75°	1429	2718	3278
80°	1127	2735	2651
85°	832	2079	2330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.1	3.0
10°-20°	466.4	8.6
20°-30°	713.3	13.1
30°-40°	872.0	16.0
40°-50°	929.3	17.1
50°-60°	888.6	16.4
60°-70°	752.7	13.9
70°-80°	505.9	9.3
80°-90°	142.7	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°	1341.8	24.7
0°-40°	2213.7	40.7
0°-60°	4031.6	74.2
0°-90°	5432.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5432.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1708	1708	1708	1708	1708	
5°	1708	1706	1698	1706	1706	162
15°	1649	1649	1646	1660	1657	465
25°	1531	1536	1547	1560	1563	705
35°	1358	1369	1390	1418	1423	851
45°	1140	1159	1199	1250	1272	879
55°	881	914	994	1072	1110	785
65°	582	641	773	876	916	578
75°	275	375	523	612	631	294
85°	54	110	135	146	151	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1708.5	1708.5	1708.5	1708.5	1708.5
2.5°	1711.2	1711.2	1703.1	1708.5	1708.5
5°	1708.5	1705.8	1697.7	1705.8	1705.8
7.5°	1700.4	1697.7	1692.3	1700.4	1697.7
10°	1684.2	1684.2	1678.8	1686.9	1686.9
12.5°	1670.8	1668.1	1665.4	1676.2	1673.5
15°	1649.2	1649.2	1646.5	1660.0	1657.3
17.5°	1622.3	1625.0	1627.6	1638.4	1641.1
20°	1592.6	1598.0	1600.7	1616.9	1616.9
22.5°	1565.7	1568.4	1573.8	1589.9	1589.9
25°	1530.6	1536.0	1546.8	1560.3	1563.0
27.5°	1495.6	1498.3	1511.8	1530.6	1533.3
30°	1449.8	1457.9	1474.0	1495.6	1498.3
32.5°	1409.4	1417.5	1436.3	1457.9	1463.3
35°	1358.2	1368.9	1390.5	1417.5	1422.8
37.5°	1312.4	1320.4	1347.4	1377.0	1385.1
40°	1255.8	1271.9	1298.9	1333.9	1347.4
42.5°	1199.2	1215.3	1247.7	1293.5	1309.7
45°	1139.9	1158.8	1199.2	1250.4	1271.9
47.5°	1080.6	1102.2	1148.0	1207.3	1231.5
50°	1013.2	1040.2	1096.8	1164.1	1191.1
52.5°	948.6	980.9	1042.9	1118.3	1153.4
55°	881.2	913.5	994.4	1072.5	1110.3
57.5°	805.7	848.9	937.8	1026.7	1067.1
60°	735.7	776.1	883.9	980.9	1021.3
62.5°	660.2	714.1	830.0	932.4	972.8
65°	582.1	641.4	773.4	875.8	916.2
67.5°	512.0	576.7	716.8	819.2	859.6
70°	428.5	509.3	654.8	757.2	797.7
72.5°	350.3	439.2	590.2	689.9	727.6
75°	274.9	374.6	522.8	611.7	630.6
77.5°	204.8	309.9	452.7	490.5	477.0
80°	145.5	247.9	353.0	334.2	342.2
82.5°	94.3	188.6	218.3	247.9	256.0
85°	53.9	110.5	134.7	145.5	150.9
87.5°	24.3	40.4	53.9	53.9	51.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)