

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: P391612

Luminaire Tested: **24CZ2-70VHE-HRP-UNV-L940-CD1-SWPD1-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: P391612
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-L940-CD1-SWPD1-U
Description: 2x4 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: 5054.9 lumens
Efficiency: N/A
Efficacy: 110.6 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

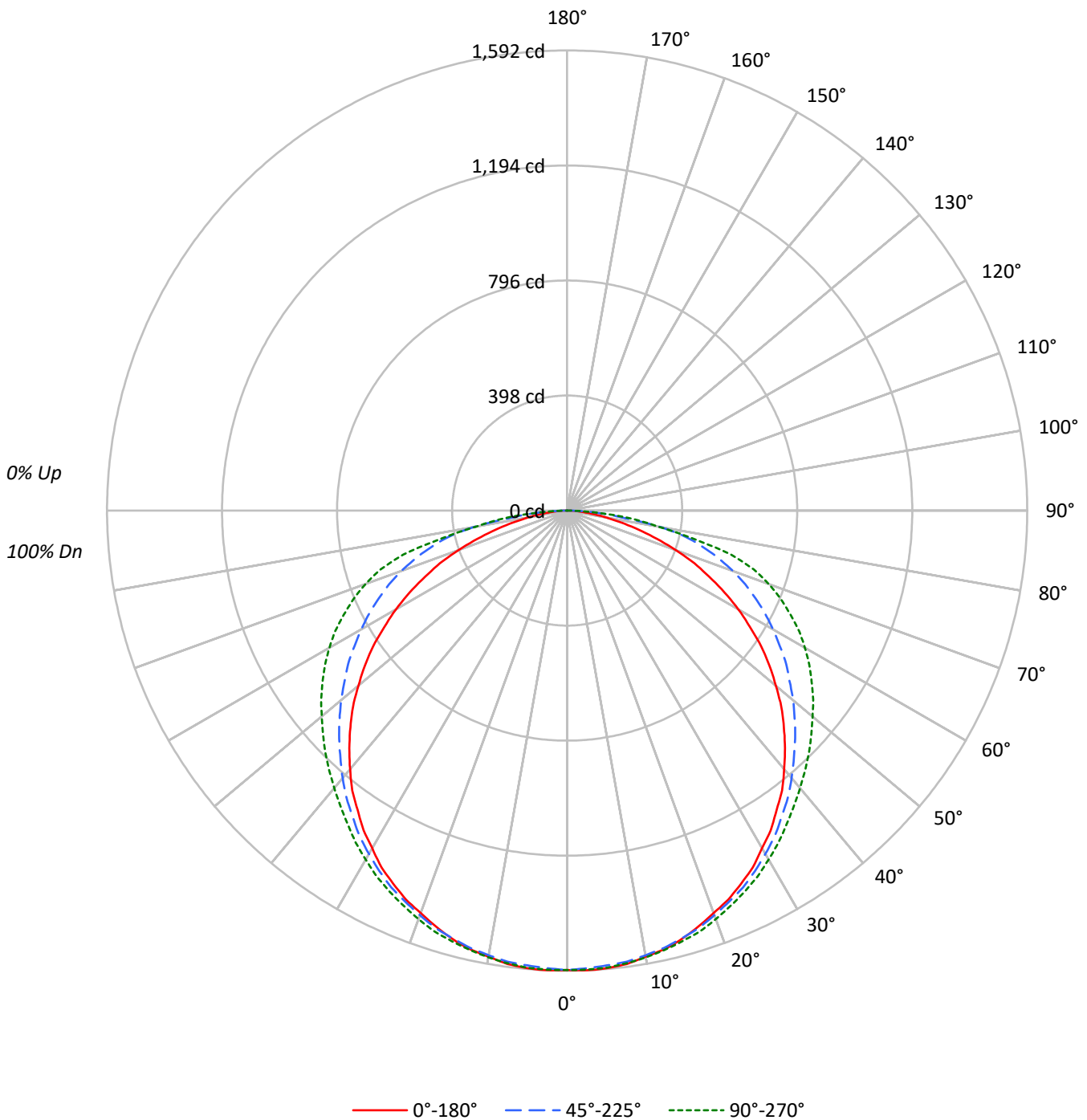
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2139	2139	2139
5°	2147	2133	2144
10°	2141	2134	2144
15°	2137	2134	2148
20°	2122	2132	2154
25°	2114	2137	2159
30°	2096	2131	2166
35°	2076	2125	2174
40°	2052	2123	2202
45°	2018	2123	2252
50°	1973	2136	2320
55°	1923	2170	2423
60°	1842	2213	2557
65°	1724	2291	2714
70°	1568	2397	2920
75°	1329	2529	3050
80°	1049	2545	2467
85°	773	1936	2167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.8	3.0
10°-20°	434.0	8.6
20°-30°	663.6	13.1
30°-40°	811.3	16.0
40°-50°	864.7	17.1
50°-60°	826.7	16.4
60°-70°	700.3	13.9
70°-80°	470.7	9.3
80°-90°	132.8	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°	1248.4	24.7
0°-40°	2059.7	40.7
0°-60°	3751.1	74.2
0°-90°	5054.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5054.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1590	1590	1590	1590	1590	
5°	1590	1587	1580	1587	1587	151
15°	1534	1534	1532	1544	1542	433
25°	1424	1429	1439	1452	1454	656
35°	1264	1274	1294	1319	1324	792
45°	1061	1078	1116	1163	1183	818
55°	820	850	925	998	1033	730
65°	542	597	720	815	852	538
75°	256	348	486	569	587	274
85°	50	103	125	135	140	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1589.6	1589.6	1589.6	1589.6	1589.6
2.5°	1592.1	1592.1	1584.6	1589.6	1589.6
5°	1589.6	1587.1	1579.6	1587.1	1587.1
7.5°	1582.1	1579.6	1574.6	1582.1	1579.6
10°	1567.1	1567.1	1562.0	1569.6	1569.6
12.5°	1554.5	1552.0	1549.5	1559.5	1557.0
15°	1534.5	1534.5	1532.0	1544.5	1542.0
17.5°	1509.4	1511.9	1514.4	1524.4	1526.9
20°	1481.8	1486.8	1489.3	1504.4	1504.4
22.5°	1456.7	1459.2	1464.3	1479.3	1479.3
25°	1424.1	1429.2	1439.2	1451.7	1454.2
27.5°	1391.5	1394.1	1406.6	1424.1	1426.6
30°	1348.9	1356.4	1371.5	1391.5	1394.1
32.5°	1311.3	1318.8	1336.4	1356.4	1361.5
35°	1263.7	1273.7	1293.8	1318.8	1323.8
37.5°	1221.1	1228.6	1253.6	1281.2	1288.7
40°	1168.4	1183.4	1208.5	1241.1	1253.6
42.5°	1115.7	1130.8	1160.9	1203.5	1218.5
45°	1060.6	1078.1	1115.7	1163.4	1183.4
47.5°	1005.4	1025.5	1068.1	1123.3	1145.8
50°	942.7	967.8	1020.5	1083.1	1108.2
52.5°	882.6	912.7	970.3	1040.5	1073.1
55°	819.9	850.0	925.2	997.9	1033.0
57.5°	749.7	789.8	872.5	955.3	992.9
60°	684.5	722.1	822.4	912.7	950.3
62.5°	614.3	664.4	772.2	867.5	905.1
65°	541.6	596.7	719.6	814.9	852.5
67.5°	476.4	536.6	666.9	762.2	799.8
70°	398.7	473.9	609.3	704.5	742.2
72.5°	325.9	408.7	549.1	641.9	677.0
75°	255.7	348.5	486.4	569.2	586.7
77.5°	190.6	288.3	421.2	456.3	443.8
80°	135.4	230.7	328.5	310.9	318.4
82.5°	87.8	175.5	203.1	230.7	238.2
85°	50.1	102.8	125.4	135.4	140.4
87.5°	22.6	37.6	50.1	50.1	47.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)