

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: P391659

Luminaire Tested: **24CZ2-75VHE-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: P391659
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: 24CZ2-75VHE-HRP-UNV-L940-CD1-SDWPD1-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: 5420.6 lumens
Efficiency: N/A
Efficacy: 108.6 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

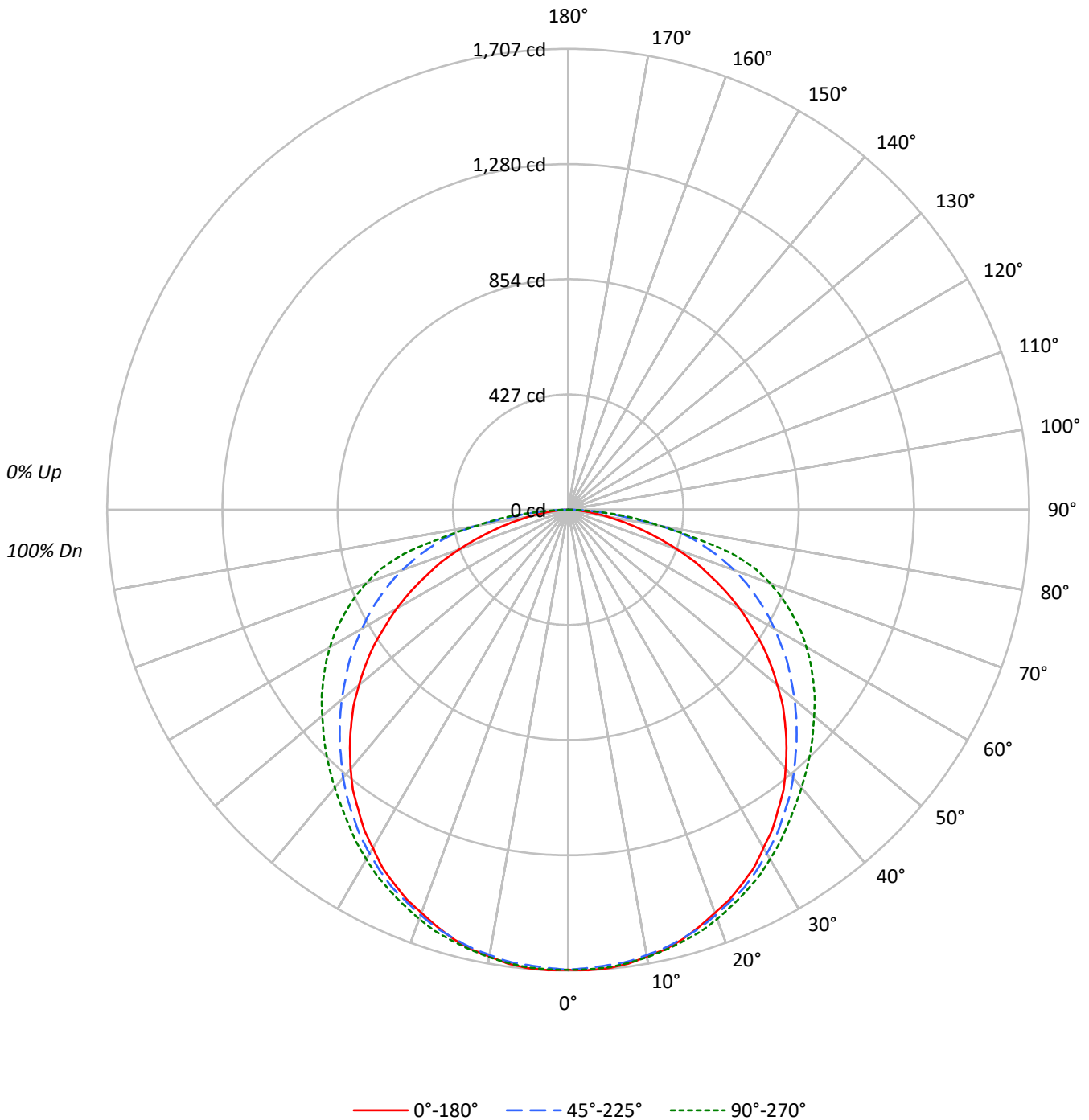
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2294	2294	2294
5°	2302	2288	2299
10°	2296	2288	2300
15°	2292	2288	2303
20°	2275	2287	2310
25°	2267	2291	2315
30°	2247	2285	2323
35°	2226	2279	2332
40°	2201	2276	2361
45°	2164	2277	2415
50°	2116	2291	2488
55°	2062	2327	2598
60°	1975	2373	2742
65°	1849	2457	2911
70°	1682	2570	3131
75°	1425	2712	3271
80°	1125	2729	2646
85°	831	2075	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	3.0
10°-20°	465.4	8.6
20°-30°	711.6	13.1
30°-40°	870.0	16.0
40°-50°	927.2	17.1
50°-60°	886.5	16.4
60°-70°	751.0	13.9
70°-80°	504.7	9.3
80°-90°	142.4	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°	1338.7	24.7
0°-40°	2208.7	40.7
0°-60°	4022.5	74.2
0°-90°	5420.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5420.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1705	1702	1694	1702	1702	162
15°	1646	1646	1643	1656	1654	464
25°	1527	1532	1543	1557	1559	704
35°	1355	1366	1387	1414	1420	849
45°	1137	1156	1196	1248	1269	877
55°	879	912	992	1070	1108	783
65°	581	640	772	874	914	577
75°	274	374	522	610	629	294
85°	54	110	134	145	151	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1704.6	1704.6	1704.6	1704.6	1704.6
2.5°	1707.3	1707.3	1699.2	1704.6	1704.6
5°	1704.6	1701.9	1693.9	1701.9	1701.9
7.5°	1696.6	1693.9	1688.5	1696.6	1693.9
10°	1680.4	1680.4	1675.0	1683.1	1683.1
12.5°	1667.0	1664.3	1661.6	1672.4	1669.7
15°	1645.5	1645.5	1642.8	1656.2	1653.5
17.5°	1618.6	1621.3	1624.0	1634.7	1637.4
20°	1589.0	1594.4	1597.1	1613.2	1613.2
22.5°	1562.1	1564.8	1570.2	1586.3	1586.3
25°	1527.2	1532.5	1543.3	1556.7	1559.4
27.5°	1492.2	1494.9	1508.4	1527.2	1529.9
30°	1446.5	1454.6	1470.7	1492.2	1494.9
32.5°	1406.2	1414.2	1433.1	1454.6	1460.0
35°	1355.1	1365.9	1387.4	1414.2	1419.6
37.5°	1309.4	1317.5	1344.3	1373.9	1382.0
40°	1252.9	1269.1	1295.9	1330.9	1344.3
42.5°	1196.5	1212.6	1244.9	1290.6	1306.7
45°	1137.3	1156.1	1196.5	1247.5	1269.1
47.5°	1078.2	1099.7	1145.4	1204.5	1228.7
50°	1010.9	1037.8	1094.3	1161.5	1188.4
52.5°	946.4	978.7	1040.5	1115.8	1150.8
55°	879.2	911.5	992.1	1070.1	1107.7
57.5°	803.9	846.9	935.7	1024.4	1064.7
60°	734.0	774.3	881.9	978.7	1019.0
62.5°	658.7	712.5	828.1	930.3	970.6
65°	580.8	639.9	771.7	873.8	914.2
67.5°	510.8	575.4	715.2	817.4	857.7
70°	427.5	508.2	653.3	755.5	795.8
72.5°	349.5	438.3	588.8	688.3	725.9
75°	274.2	373.7	521.6	610.3	629.2
77.5°	204.3	309.2	451.7	489.3	475.9
80°	145.2	247.4	352.2	333.4	341.5
82.5°	94.1	188.2	217.8	247.4	255.4
85°	53.8	110.2	134.4	145.2	150.6
87.5°	24.2	40.3	53.8	53.8	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)