

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: P391613

Luminaire Tested: **24CZ2-70VHE-HRP-UNV-L940-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: P391613
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-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: 5118.4 lumens
Efficiency: N/A
Efficacy: 112.0 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

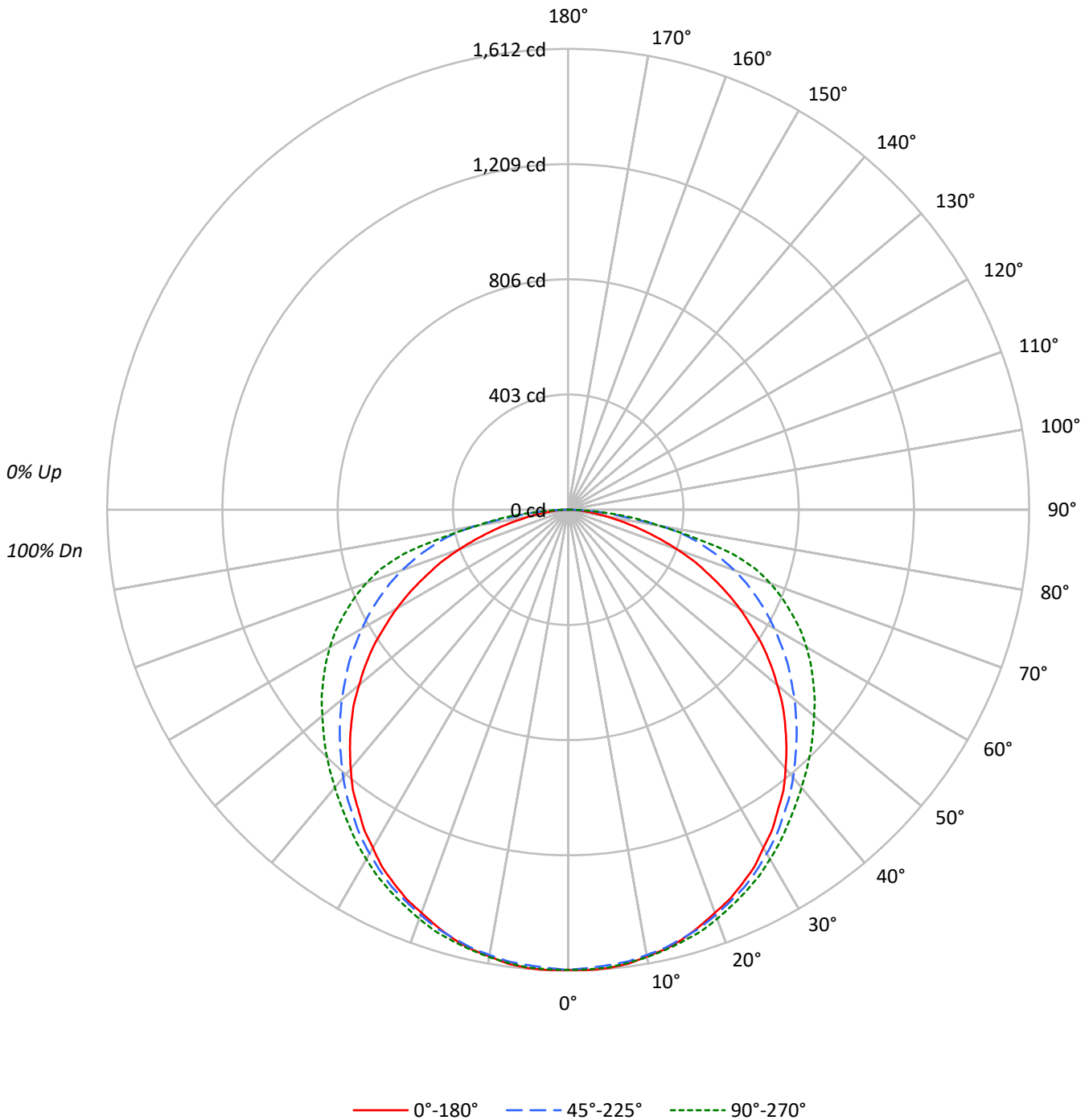
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2166	2166	2166
5°	2174	2160	2171
10°	2168	2161	2171
15°	2164	2161	2175
20°	2148	2159	2181
25°	2141	2163	2186
30°	2122	2158	2193
35°	2102	2152	2202
40°	2078	2149	2230
45°	2043	2150	2280
50°	1998	2163	2349
55°	1947	2198	2454
60°	1865	2241	2589
65°	1746	2320	2748
70°	1588	2427	2956
75°	1346	2560	3088
80°	1062	2577	2498
85°	784	1959	2195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.7	3.0
10°-20°	439.4	8.6
20°-30°	672.0	13.1
30°-40°	821.5	16.0
40°-50°	875.5	17.1
50°-60°	837.1	16.4
60°-70°	709.1	13.9
70°-80°	476.6	9.3
80°-90°	134.4	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°	1264.1	24.7
0°-40°	2085.6	40.7
0°-60°	3798.2	74.2
0°-90°	5118.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5118.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1610	1610	1610	1610	1610	
5°	1610	1607	1599	1607	1607	153
15°	1554	1554	1551	1564	1561	438
25°	1442	1447	1457	1470	1472	665
35°	1280	1290	1310	1335	1340	802
45°	1074	1092	1130	1178	1198	828
55°	830	861	937	1010	1046	739
65°	548	604	729	825	863	544
75°	259	353	492	576	594	277
85°	51	104	127	137	142	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1612.1	1612.1	1604.5	1609.6	1609.6
5°	1609.6	1607.1	1599.4	1607.1	1607.1
7.5°	1602.0	1599.4	1594.4	1602.0	1599.4
10°	1586.7	1586.7	1581.7	1589.3	1589.3
12.5°	1574.0	1571.5	1569.0	1579.1	1576.6
15°	1553.7	1553.7	1551.2	1563.9	1561.4
17.5°	1528.3	1530.9	1533.4	1543.6	1546.1
20°	1500.4	1505.5	1508.0	1523.3	1523.3
22.5°	1475.0	1477.6	1482.7	1497.9	1497.9
25°	1442.0	1447.1	1457.3	1470.0	1472.5
27.5°	1409.0	1411.6	1424.3	1442.0	1444.6
30°	1365.9	1373.5	1388.7	1409.0	1411.6
32.5°	1327.8	1335.4	1353.2	1373.5	1378.6
35°	1279.5	1289.7	1310.0	1335.4	1340.5
37.5°	1236.4	1244.0	1269.4	1297.3	1304.9
40°	1183.1	1198.3	1223.7	1256.7	1269.4
42.5°	1129.8	1145.0	1175.5	1218.6	1233.9
45°	1073.9	1091.7	1129.8	1178.0	1198.3
47.5°	1018.1	1038.4	1081.5	1137.4	1160.2
50°	954.6	980.0	1033.3	1096.8	1122.1
52.5°	893.7	924.1	982.5	1053.6	1086.6
55°	830.2	860.6	936.8	1010.4	1046.0
57.5°	759.1	799.7	883.5	967.3	1005.4
60°	693.1	731.2	832.7	924.1	962.2
62.5°	622.0	672.8	781.9	878.4	916.5
65°	548.4	604.2	728.6	825.1	863.2
67.5°	482.4	543.3	675.3	771.8	809.9
70°	403.7	479.8	616.9	713.4	751.5
72.5°	330.0	413.8	556.0	649.9	685.5
75°	259.0	352.9	492.5	576.3	594.1
77.5°	192.9	292.0	426.5	462.1	449.4
80°	137.1	233.6	332.6	314.8	322.4
82.5°	88.9	177.7	205.6	233.6	241.2
85°	50.8	104.1	126.9	137.1	142.2
87.5°	22.8	38.1	50.8	50.8	48.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)