

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: P391421

Luminaire Tested: **24CZ2-50VHE-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: P391421
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: 24CZ2-50VHE-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: 3671.9 lumens
Efficiency: N/A
Efficacy: 112.3 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

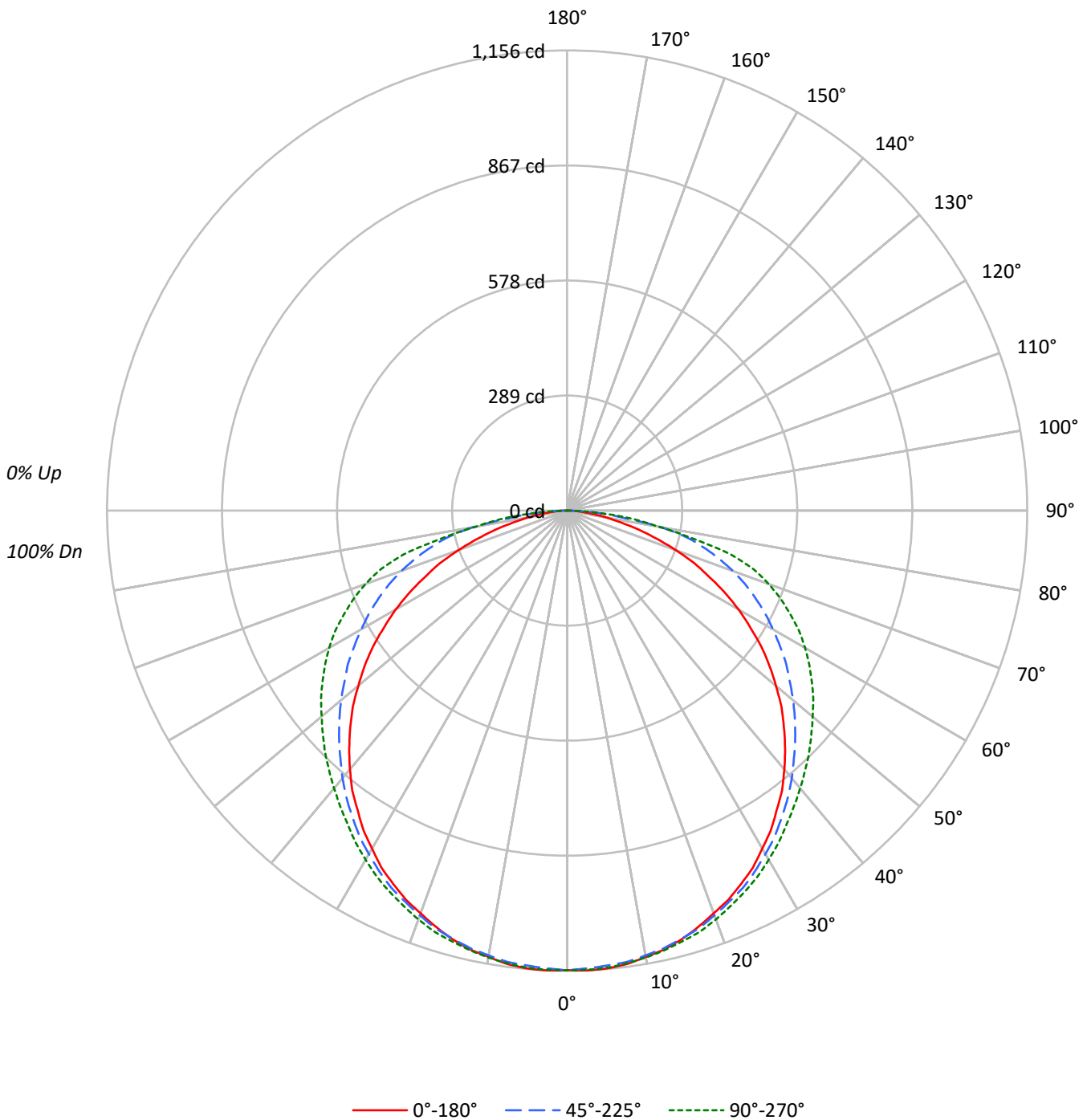
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1554	1554	1554
5°	1560	1550	1557
10°	1555	1550	1558
15°	1553	1550	1560
20°	1541	1549	1565
25°	1536	1552	1568
30°	1522	1548	1573
35°	1508	1544	1579
40°	1491	1542	1600
45°	1466	1542	1636
50°	1433	1552	1685
55°	1397	1577	1760
60°	1338	1608	1858
65°	1252	1664	1971
70°	1139	1741	2121
75°	966	1837	2216
80°	762	1849	1792
85°	562	1406	1575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	3.0
10°-20°	315.2	8.6
20°-30°	482.1	13.1
30°-40°	589.3	16.0
40°-50°	628.1	17.1
50°-60°	600.5	16.4
60°-70°	508.7	13.9
70°-80°	341.9	9.3
80°-90°	96.4	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
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0°-30°	906.8	24.7
0°-40°	1496.2	40.7
0°-60°	2724.8	74.2
0°-90°	3671.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3671.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1155	1155	1155	1155	1155	
5°	1155	1153	1147	1153	1153	110
15°	1115	1115	1113	1122	1120	314
25°	1034	1038	1045	1054	1056	477
35°	918	925	940	958	962	575
45°	770	783	810	845	860	594
55°	596	617	672	725	750	530
65°	393	434	523	592	619	391
75°	186	253	353	413	426	199
85°	36	75	91	98	102	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1154.7	1154.7	1154.7	1154.7	1154.7
2.5°	1156.5	1156.5	1151.1	1154.7	1154.7
5°	1154.7	1152.9	1147.4	1152.9	1152.9
7.5°	1149.2	1147.4	1143.8	1149.2	1147.4
10°	1138.3	1138.3	1134.7	1140.1	1140.1
12.5°	1129.2	1127.4	1125.6	1132.9	1131.0
15°	1114.6	1114.6	1112.8	1121.9	1120.1
17.5°	1096.4	1098.2	1100.1	1107.4	1109.2
20°	1076.4	1080.0	1081.9	1092.8	1092.8
22.5°	1058.2	1060.0	1063.6	1074.6	1074.6
25°	1034.5	1038.1	1045.4	1054.5	1056.4
27.5°	1010.8	1012.6	1021.8	1034.5	1036.3
30°	979.9	985.3	996.3	1010.8	1012.6
32.5°	952.5	958.0	970.8	985.3	989.0
35°	917.9	925.2	939.8	958.0	961.6
37.5°	887.0	892.4	910.7	930.7	936.2
40°	848.7	859.7	877.9	901.5	910.7
42.5°	810.5	821.4	843.3	874.2	885.2
45°	770.4	783.2	810.5	845.1	859.7
47.5°	730.3	744.9	775.9	815.9	832.3
50°	684.8	703.0	741.3	786.8	805.0
52.5°	641.1	663.0	704.8	755.8	779.5
55°	595.6	617.4	672.1	724.9	750.4
57.5°	544.6	573.7	633.8	693.9	721.2
60°	497.2	524.5	597.4	663.0	690.3
62.5°	446.2	482.6	561.0	630.2	657.5
65°	393.4	433.5	522.7	591.9	619.2
67.5°	346.0	389.8	484.5	553.7	581.0
70°	289.6	344.2	442.6	511.8	539.1
72.5°	236.8	296.9	398.9	466.3	491.8
75°	185.8	253.2	353.3	413.4	426.2
77.5°	138.4	209.5	306.0	331.5	322.4
80°	98.4	167.6	238.6	225.8	231.3
82.5°	63.7	127.5	147.5	167.6	173.0
85°	36.4	74.7	91.1	98.4	102.0
87.5°	16.4	27.3	36.4	36.4	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)