

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: P391520

Luminaire Tested: **24CZ2-60VHE-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: P391520
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: 24CZ2-60VHE-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: 4660.2 lumens
Efficiency: N/A
Efficacy: 120.4 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

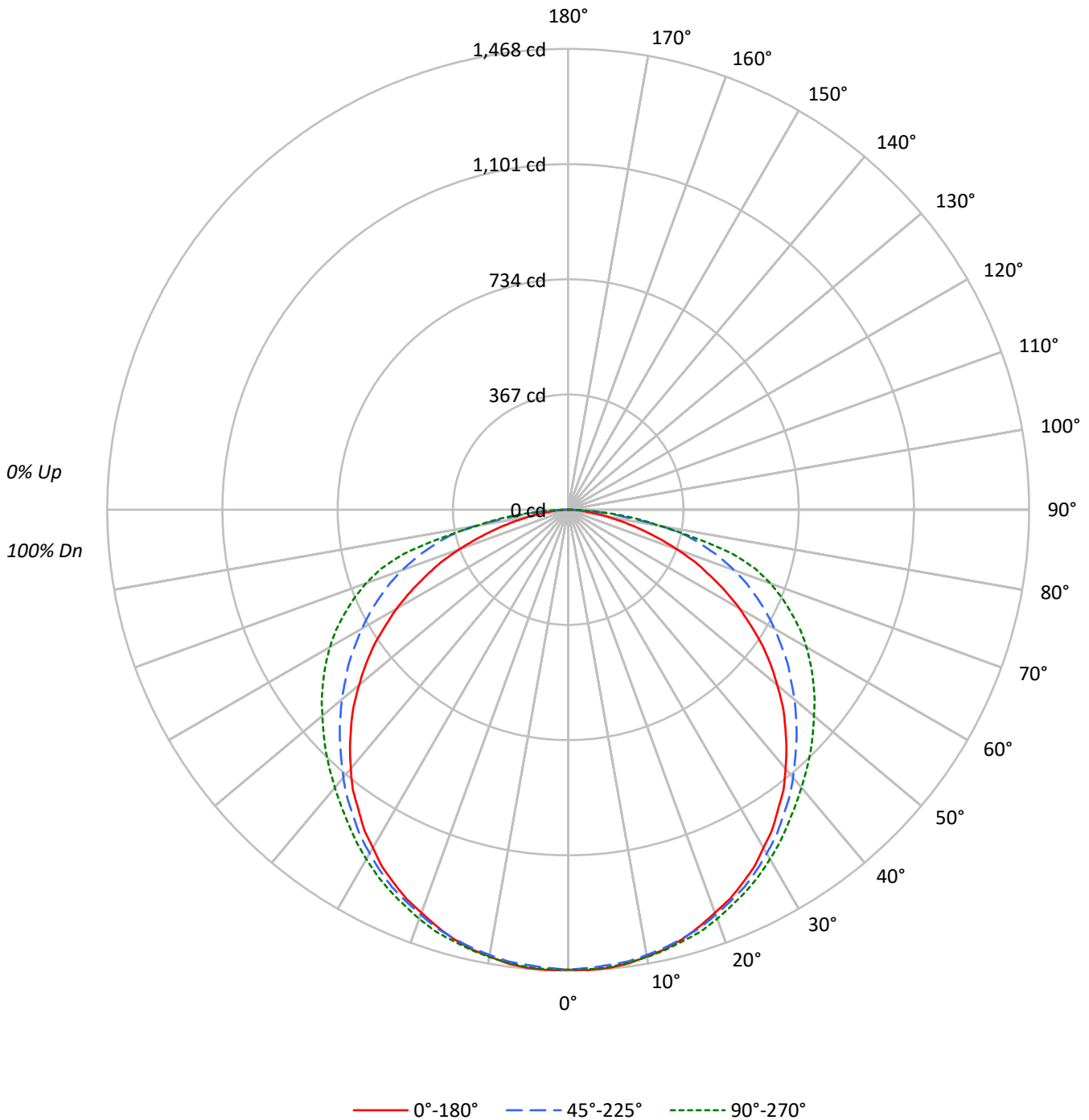
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1972	1972	1972
5°	1979	1967	1976
10°	1974	1968	1977
15°	1970	1967	1980
20°	1956	1966	1986
25°	1949	1970	1990
30°	1932	1964	1997
35°	1914	1959	2005
40°	1892	1957	2030
45°	1861	1957	2076
50°	1819	1969	2139
55°	1773	2001	2234
60°	1698	2040	2358
65°	1590	2112	2502
70°	1446	2210	2692
75°	1226	2331	2812
80°	967	2346	2275
85°	713	1785	1998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.0	3.0
10°-20°	400.1	8.6
20°-30°	611.8	13.1
30°-40°	747.9	16.0
40°-50°	797.1	17.1
50°-60°	762.2	16.4
60°-70°	645.7	13.9
70°-80°	433.9	9.3
80°-90°	122.4	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°	1150.9	24.7
0°-40°	1898.9	40.7
0°-60°	3458.2	74.2
0°-90°	4660.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4660.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1466	1463	1456	1463	1463	139
15°	1415	1415	1412	1424	1422	399
25°	1313	1318	1327	1338	1341	605
35°	1165	1174	1193	1216	1220	730
45°	978	994	1029	1072	1091	754
55°	756	784	853	920	952	673
65°	499	550	663	751	786	496
75°	236	321	448	525	541	252
85°	46	95	116	125	129	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1465.5	1465.5	1465.5	1465.5	1465.5
2.5°	1467.8	1467.8	1460.9	1465.5	1465.5
5°	1465.5	1463.2	1456.3	1463.2	1463.2
7.5°	1458.6	1456.3	1451.6	1458.6	1456.3
10°	1444.7	1444.7	1440.1	1447.0	1447.0
12.5°	1433.1	1430.8	1428.5	1437.8	1435.5
15°	1414.6	1414.6	1412.3	1423.9	1421.6
17.5°	1391.5	1393.8	1396.2	1405.4	1407.7
20°	1366.1	1370.7	1373.0	1386.9	1386.9
22.5°	1343.0	1345.3	1349.9	1363.8	1363.8
25°	1312.9	1317.6	1326.8	1338.4	1340.7
27.5°	1282.9	1285.2	1296.8	1312.9	1315.3
30°	1243.6	1250.5	1264.4	1282.9	1285.2
32.5°	1208.9	1215.9	1232.0	1250.5	1255.2
35°	1165.0	1174.2	1192.7	1215.9	1220.5
37.5°	1125.7	1132.6	1155.8	1181.2	1188.1
40°	1077.2	1091.0	1114.1	1144.2	1155.8
42.5°	1028.6	1042.5	1070.2	1109.5	1123.4
45°	977.8	994.0	1028.6	1072.5	1091.0
47.5°	926.9	945.4	984.7	1035.6	1056.4
50°	869.1	892.2	940.8	998.6	1021.7
52.5°	813.7	841.4	894.6	959.3	989.3
55°	755.9	783.6	852.9	920.0	952.3
57.5°	691.1	728.1	804.4	880.7	915.4
60°	631.0	665.7	758.2	841.4	876.1
62.5°	566.3	612.6	711.9	799.8	834.5
65°	499.3	550.1	663.4	751.2	785.9
67.5°	439.2	494.7	614.9	702.7	737.4
70°	367.5	436.9	561.7	649.5	684.2
72.5°	300.5	376.8	506.2	591.7	624.1
75°	235.8	321.3	448.4	524.7	540.9
77.5°	175.7	265.8	388.3	420.7	409.1
80°	124.8	212.7	302.8	286.6	293.6
82.5°	80.9	161.8	187.2	212.7	219.6
85°	46.2	94.8	115.6	124.8	129.4
87.5°	20.8	34.7	46.2	46.2	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)