

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: P391822

Luminaire Tested: **24CZ2-90VHE-RDP-UNV-L930-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: P391822
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: 24CZ2-90VHE-RDP-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4961.3 lumens
Efficiency: N/A
Efficacy: 80.3 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

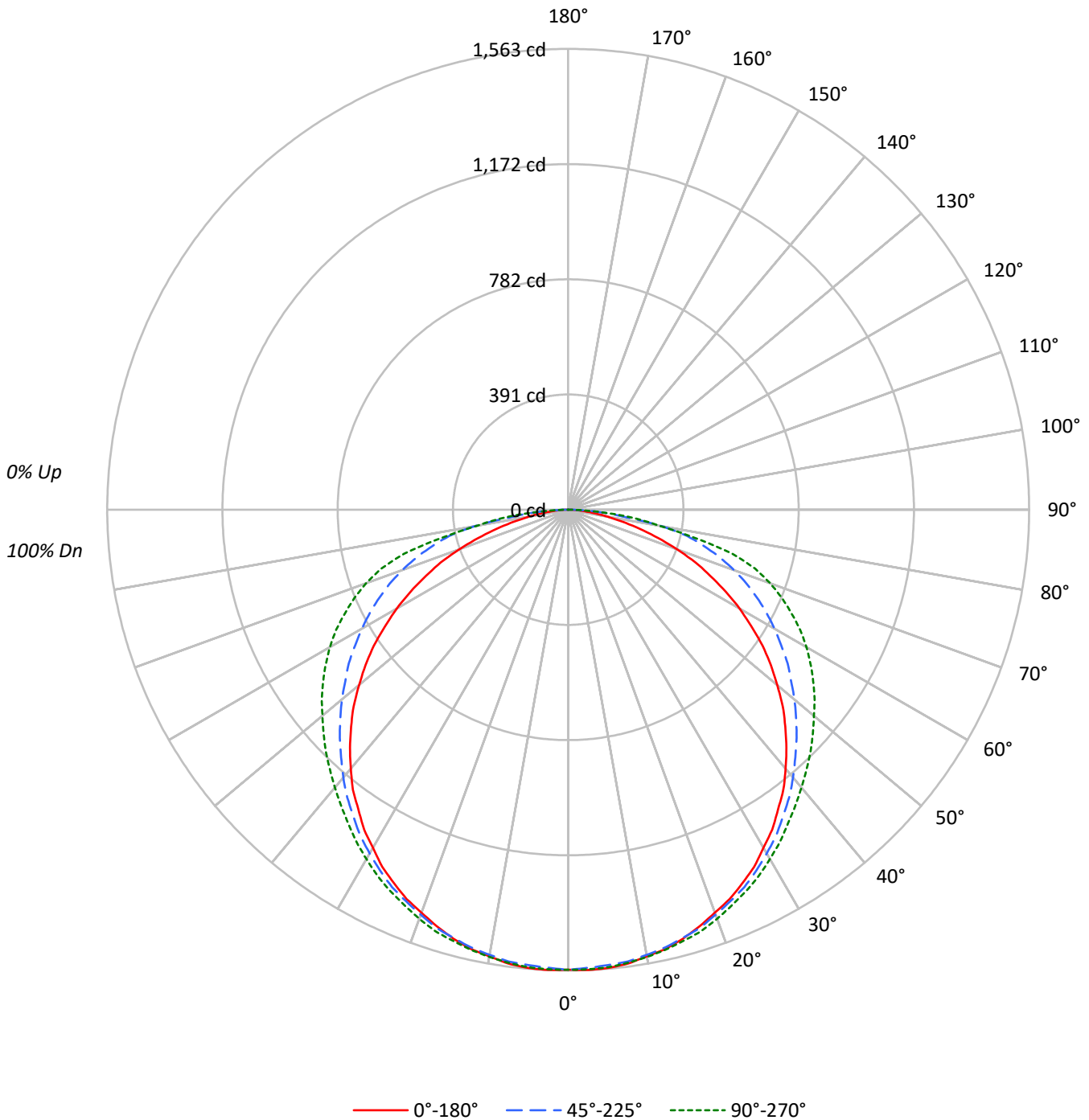
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2099	2099	2099
5°	2107	2094	2104
10°	2101	2095	2105
15°	2098	2094	2108
20°	2082	2093	2114
25°	2075	2097	2119
30°	2057	2091	2126
35°	2037	2086	2134
40°	2014	2083	2161
45°	1981	2084	2210
50°	1937	2097	2277
55°	1888	2130	2378
60°	1808	2172	2510
65°	1692	2249	2664
70°	1539	2353	2865
75°	1305	2482	2993
80°	1030	2498	2421
85°	760	1899	2127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.0	3.0
10°-20°	425.9	8.6
20°-30°	651.3	13.1
30°-40°	796.3	16.0
40°-50°	848.7	17.1
50°-60°	811.4	16.4
60°-70°	687.4	13.9
70°-80°	462.0	9.3
80°-90°	130.3	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°	1225.3	24.7
0°-40°	2021.5	40.7
0°-60°	3681.6	74.2
0°-90°	4961.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4961.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1560	1560	1560	1560	1560	
5°	1560	1558	1550	1558	1558	148
15°	1506	1506	1504	1516	1513	425
25°	1398	1403	1412	1425	1427	644
35°	1240	1250	1270	1294	1299	777
45°	1041	1058	1095	1142	1162	803
55°	805	834	908	979	1014	717
65°	532	586	706	800	837	528
75°	251	342	477	559	576	269
85°	49	101	123	133	138	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1560.2	1560.2	1560.2	1560.2	1560.2
2.5°	1562.6	1562.6	1555.3	1560.2	1560.2
5°	1560.2	1557.7	1550.3	1557.7	1557.7
7.5°	1552.8	1550.3	1545.4	1552.8	1550.3
10°	1538.0	1538.0	1533.1	1540.5	1540.5
12.5°	1525.7	1523.3	1520.8	1530.7	1528.2
15°	1506.0	1506.0	1503.6	1515.9	1513.4
17.5°	1481.4	1483.9	1486.4	1496.2	1498.7
20°	1454.4	1459.3	1461.8	1476.5	1476.5
22.5°	1429.8	1432.2	1437.1	1451.9	1451.9
25°	1397.8	1402.7	1412.5	1424.8	1427.3
27.5°	1365.8	1368.2	1380.5	1397.8	1400.2
30°	1323.9	1331.3	1346.1	1365.8	1368.2
32.5°	1287.0	1294.4	1311.6	1331.3	1336.2
35°	1240.3	1250.1	1269.8	1294.4	1299.3
37.5°	1198.4	1205.8	1230.4	1257.5	1264.9
40°	1146.8	1161.5	1186.1	1218.1	1230.4
42.5°	1095.1	1109.8	1139.4	1181.2	1196.0
45°	1040.9	1058.2	1095.1	1141.8	1161.5
47.5°	986.8	1006.5	1048.3	1102.5	1124.6
50°	925.3	949.9	1001.6	1063.1	1087.7
52.5°	866.2	895.8	952.4	1021.3	1053.2
55°	804.7	834.2	908.1	979.4	1013.9
57.5°	735.8	775.2	856.4	937.6	974.5
60°	671.8	708.7	807.2	895.8	932.7
62.5°	602.9	652.1	757.9	851.5	888.4
65°	531.5	585.7	706.3	799.8	836.7
67.5°	467.6	526.6	654.6	748.1	785.0
70°	391.3	465.1	598.0	691.5	728.4
72.5°	319.9	401.1	538.9	630.0	664.4
75°	251.0	342.1	477.4	558.6	575.8
77.5°	187.0	283.0	413.4	447.9	435.6
80°	132.9	226.4	322.4	305.1	312.5
82.5°	86.1	172.3	199.3	226.4	233.8
85°	49.2	100.9	123.0	132.9	137.8
87.5°	22.1	36.9	49.2	49.2	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)