

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: P391798

Luminaire Tested: **24CZ2-90VHE-HRP-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: P391798
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-HRP-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6261.6 lumens
Efficiency: N/A
Efficacy: 101.3 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

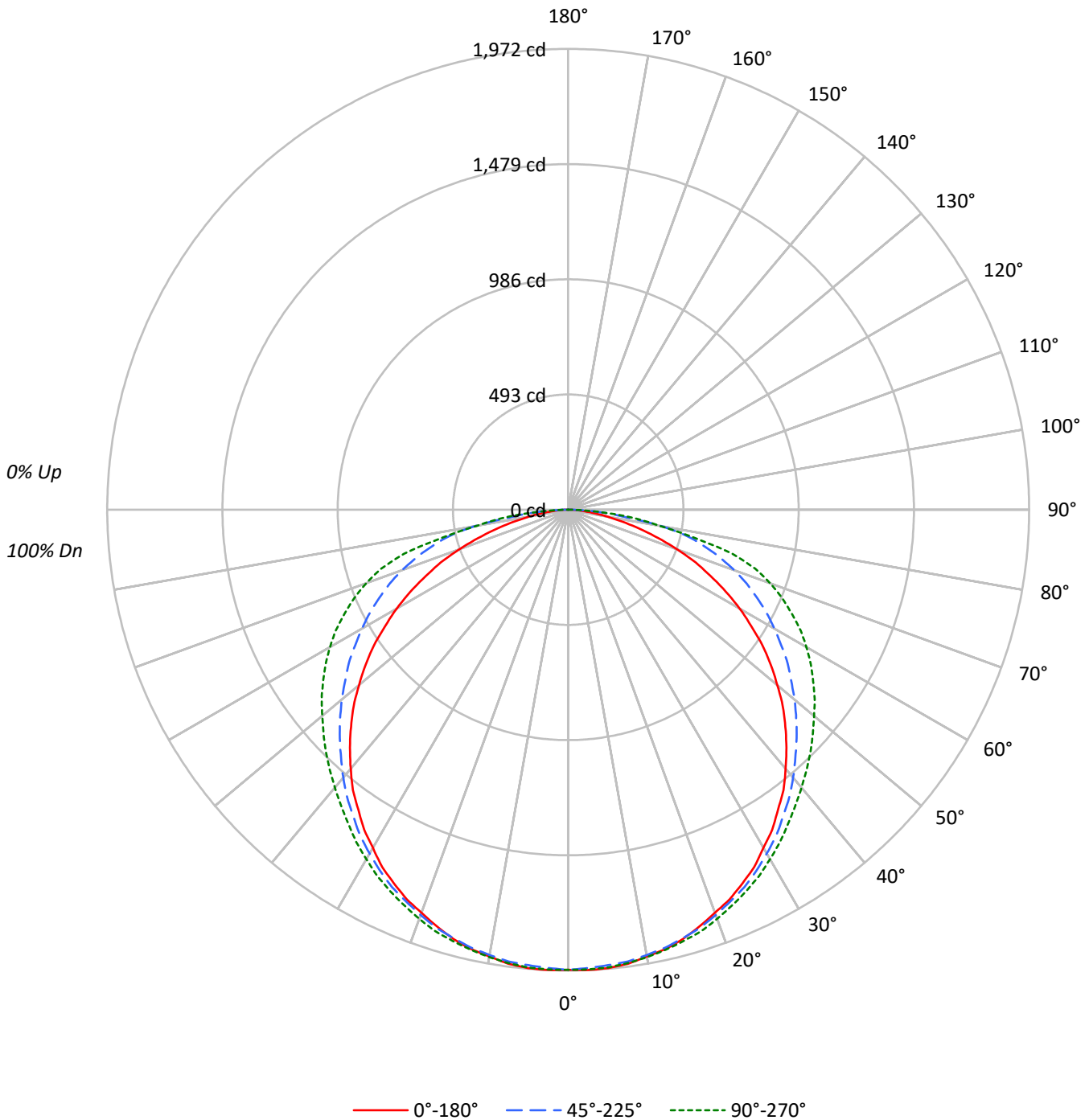
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2649	2649	2649
5°	2660	2643	2655
10°	2652	2644	2656
15°	2648	2643	2661
20°	2628	2642	2668
25°	2619	2647	2674
30°	2596	2639	2683
35°	2571	2632	2694
40°	2542	2629	2728
45°	2500	2630	2790
50°	2444	2646	2874
55°	2382	2689	3002
60°	2282	2741	3168
65°	2136	2838	3362
70°	1943	2969	3616
75°	1647	3132	3778
80°	1299	3153	3056
85°	959	2397	2685



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.8	3.0
10°-20°	537.6	8.6
20°-30°	822.1	13.1
30°-40°	1005.0	16.0
40°-50°	1071.1	17.1
50°-60°	1024.1	16.4
60°-70°	867.5	13.9
70°-80°	583.1	9.3
80°-90°	164.5	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°	1546.4	24.7
0°-40°	2551.4	40.7
0°-60°	4646.5	74.2
0°-90°	6261.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6261.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1969	1969	1969	1969	1969	
5°	1969	1966	1957	1966	1966	187
15°	1901	1901	1898	1913	1910	536
25°	1764	1770	1783	1798	1801	813
35°	1565	1578	1603	1634	1640	981
45°	1314	1336	1382	1441	1466	1013
55°	1016	1053	1146	1236	1280	905
65°	671	739	891	1009	1056	666
75°	317	432	602	705	727	339
85°	62	127	155	168	174	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1969.1	1969.1	1969.1	1969.1	1969.1
2.5°	1972.2	1972.2	1962.9	1969.1	1969.1
5°	1969.1	1966.0	1956.7	1966.0	1966.0
7.5°	1959.8	1956.7	1950.5	1959.8	1956.7
10°	1941.1	1941.1	1934.9	1944.2	1944.2
12.5°	1925.6	1922.5	1919.4	1931.8	1928.7
15°	1900.8	1900.8	1897.7	1913.2	1910.1
17.5°	1869.7	1872.8	1875.9	1888.3	1891.4
20°	1835.5	1841.8	1844.9	1863.5	1863.5
22.5°	1804.5	1807.6	1813.8	1832.4	1832.4
25°	1764.1	1770.3	1782.7	1798.3	1801.4
27.5°	1723.7	1726.8	1742.4	1764.1	1767.2
30°	1670.9	1680.3	1698.9	1723.7	1726.8
32.5°	1624.3	1633.7	1655.4	1680.3	1686.5
35°	1565.3	1577.8	1602.6	1633.7	1639.9
37.5°	1512.5	1521.9	1552.9	1587.1	1596.4
40°	1447.3	1466.0	1497.0	1537.4	1552.9
42.5°	1382.1	1400.7	1438.0	1490.8	1509.4
45°	1313.8	1335.5	1382.1	1441.1	1466.0
47.5°	1245.4	1270.3	1323.1	1391.4	1419.4
50°	1167.8	1198.8	1264.1	1341.7	1372.8
52.5°	1093.3	1130.5	1202.0	1288.9	1329.3
55°	1015.6	1052.9	1146.1	1236.1	1279.6
57.5°	928.6	978.3	1080.8	1183.3	1229.9
60°	847.9	894.5	1018.7	1130.5	1177.1
62.5°	760.9	823.0	956.6	1074.6	1121.2
65°	670.9	739.2	891.4	1009.4	1056.0
67.5°	590.1	664.6	826.2	944.2	990.8
70°	493.8	587.0	754.7	872.7	919.3
72.5°	403.8	506.2	680.2	795.1	838.6
75°	316.8	431.7	602.5	705.0	726.8
77.5°	236.0	357.2	521.8	565.3	549.7
80°	167.7	285.7	406.9	385.1	394.4
82.5°	108.7	217.4	251.6	285.7	295.1
85°	62.1	127.3	155.3	167.7	173.9
87.5°	28.0	46.6	62.1	62.1	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)