

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: P391416

Luminaire Tested: **24CZ2-50VHE-HRP-UNV-L935-CD1-SDWPD1-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: P391416
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-L935-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3545.9 lumens
Efficiency: N/A
Efficacy: 108.4 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

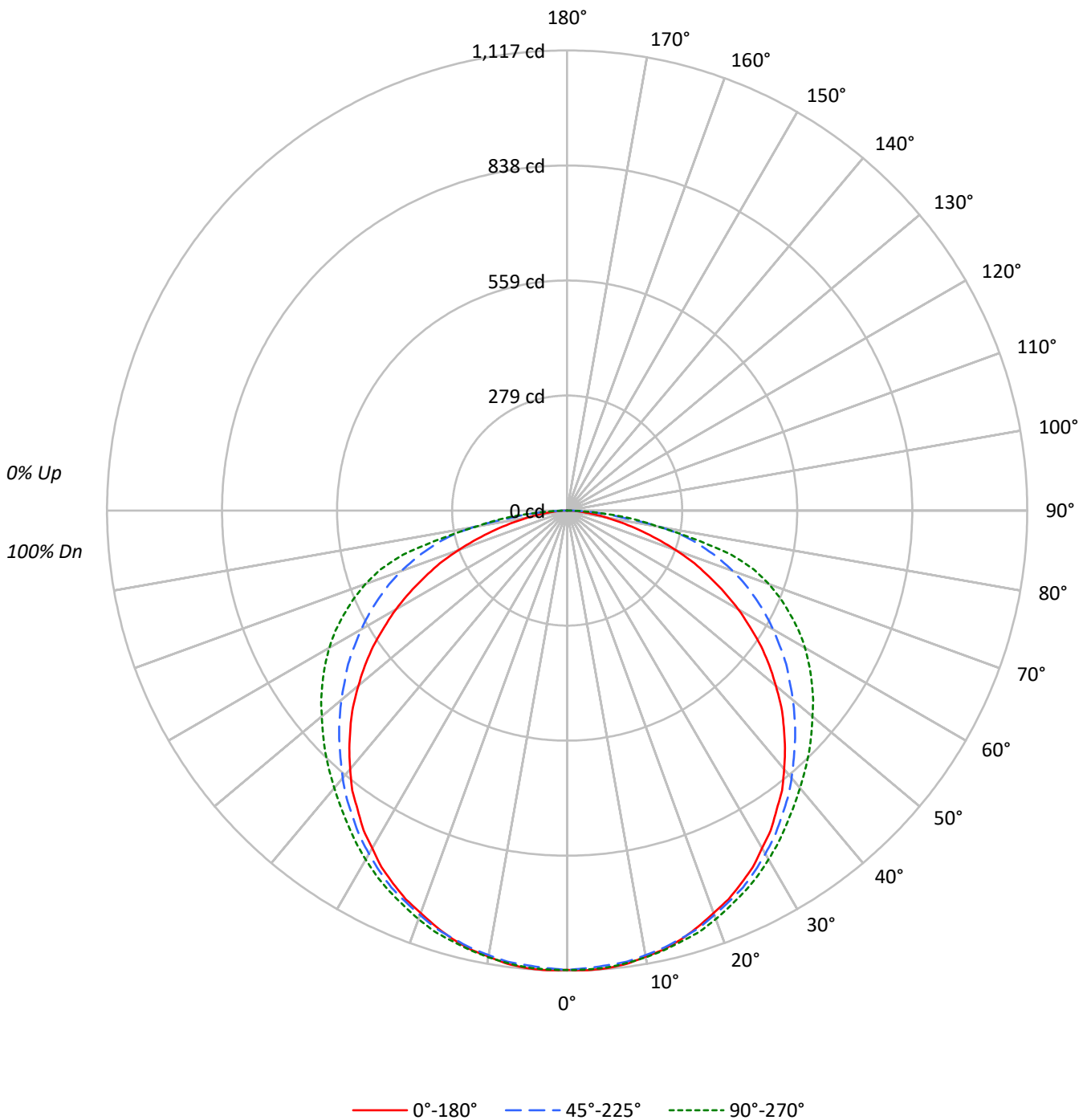
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1500	1500	1500
5°	1506	1496	1504
10°	1502	1497	1504
15°	1499	1497	1507
20°	1488	1496	1511
25°	1483	1499	1514
30°	1470	1495	1519
35°	1456	1491	1525
40°	1440	1489	1545
45°	1416	1489	1580
50°	1384	1498	1627
55°	1349	1522	1700
60°	1292	1552	1794
65°	1209	1607	1904
70°	1100	1681	2048
75°	933	1774	2140
80°	736	1785	1731
85°	543	1357	1521



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	3.0
10°-20°	304.4	8.6
20°-30°	465.5	13.1
30°-40°	569.1	16.0
40°-50°	606.5	17.1
50°-60°	579.9	16.4
60°-70°	491.3	13.9
70°-80°	330.2	9.3
80°-90°	93.1	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°	875.7	24.7
0°-40°	1444.8	40.7
0°-60°	2631.3	74.2
0°-90°	3545.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3545.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1115	1115	1115	1115	1115	
5°	1115	1113	1108	1113	1113	106
15°	1076	1076	1075	1083	1082	303
25°	999	1002	1010	1018	1020	460
35°	886	894	908	925	929	555
45°	744	756	783	816	830	574
55°	575	596	649	700	725	512
65°	380	419	505	572	598	377
75°	179	244	341	399	412	192
85°	35	72	88	95	98	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1115.1	1115.1	1115.1	1115.1	1115.1
2.5°	1116.8	1116.8	1111.6	1115.1	1115.1
5°	1115.1	1113.3	1108.0	1113.3	1113.3
7.5°	1109.8	1108.0	1104.5	1109.8	1108.0
10°	1099.3	1099.3	1095.7	1101.0	1101.0
12.5°	1090.5	1088.7	1086.9	1094.0	1092.2
15°	1076.4	1076.4	1074.6	1083.4	1081.7
17.5°	1058.8	1060.6	1062.3	1069.4	1071.1
20°	1039.5	1043.0	1044.7	1055.3	1055.3
22.5°	1021.9	1023.6	1027.1	1037.7	1037.7
25°	999.0	1002.5	1009.6	1018.3	1020.1
27.5°	976.1	977.9	986.7	999.0	1000.8
30°	946.2	951.5	962.1	976.1	977.9
32.5°	919.9	925.1	937.4	951.5	955.0
35°	886.4	893.5	907.5	925.1	928.7
37.5°	856.5	861.8	879.4	898.8	904.0
40°	819.6	830.2	847.7	870.6	879.4
42.5°	782.7	793.2	814.3	844.2	854.8
45°	744.0	756.3	782.7	816.1	830.2
47.5°	705.3	719.4	749.3	787.9	803.8
50°	661.3	678.9	715.8	759.8	777.4
52.5°	619.1	640.2	680.7	729.9	752.8
55°	575.1	596.2	649.0	700.0	724.6
57.5°	525.9	554.0	612.1	670.1	696.5
60°	480.2	506.5	576.9	640.2	666.6
62.5°	430.9	466.1	541.7	608.5	634.9
65°	379.9	418.6	504.8	571.6	598.0
67.5°	334.2	376.4	467.8	534.7	561.1
70°	279.7	332.4	427.4	494.2	520.6
72.5°	228.6	286.7	385.2	450.3	474.9
75°	179.4	244.5	341.2	399.2	411.6
77.5°	133.7	202.3	295.5	320.1	311.3
80°	95.0	161.8	230.4	218.1	223.4
82.5°	61.6	123.1	142.5	161.8	167.1
85°	35.2	72.1	87.9	95.0	98.5
87.5°	15.8	26.4	35.2	35.2	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)