

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: P391510

Luminaire Tested: **24CZ2-60VHE-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: P391510
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-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: 4188.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

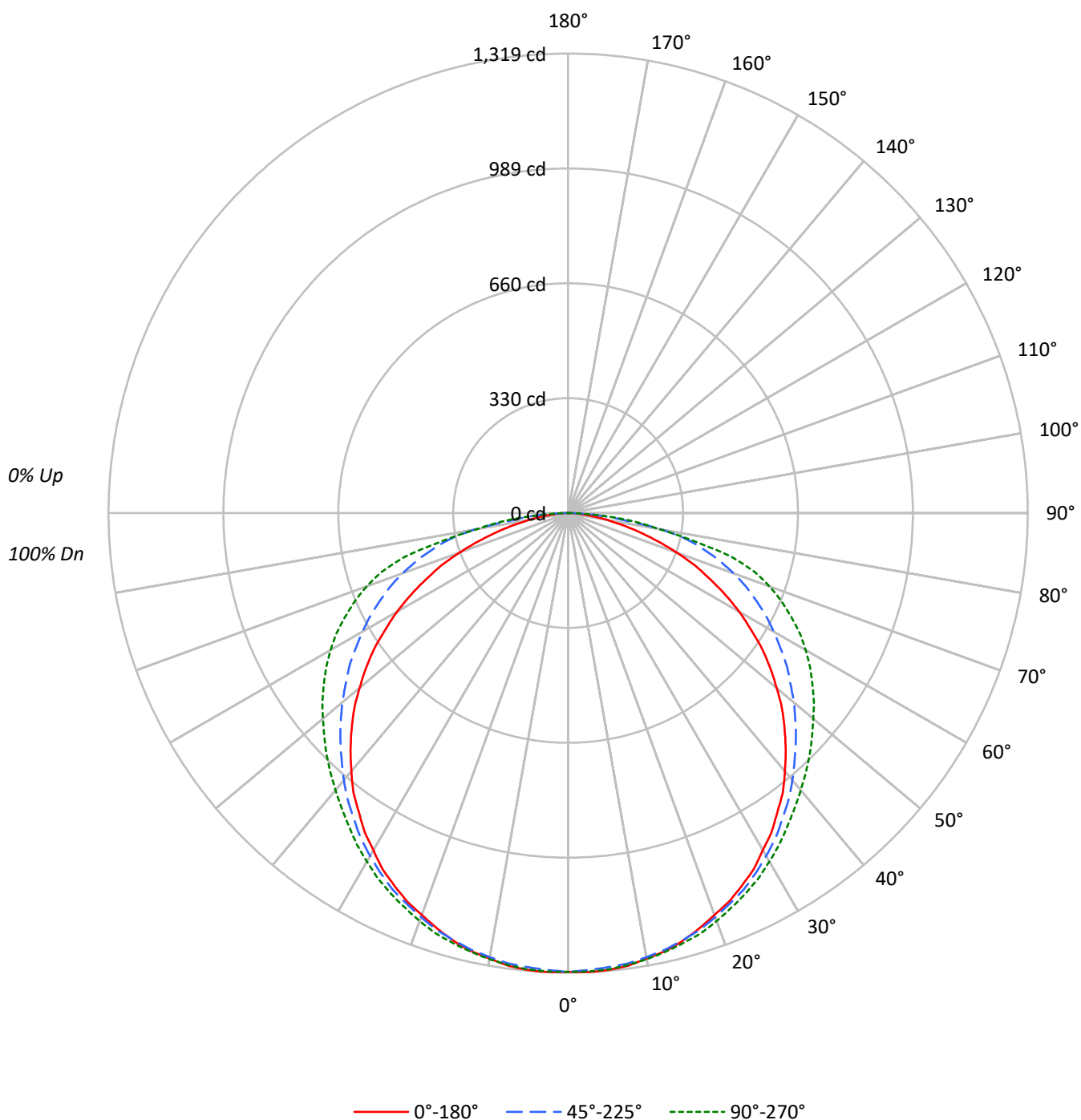
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1772	1772	1772
5°	1779	1768	1776
10°	1774	1768	1777
15°	1771	1768	1779
20°	1758	1767	1785
25°	1752	1770	1789
30°	1736	1765	1794
35°	1720	1761	1802
40°	1700	1759	1824
45°	1672	1759	1866
50°	1635	1770	1922
55°	1593	1798	2008
60°	1526	1834	2119
65°	1429	1898	2249
70°	1299	1986	2419
75°	1102	2095	2527
80°	869	2108	2044
85°	641	1604	1795



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.9	3.0
10°-20°	359.5	8.6
20°-30°	549.8	13.1
30°-40°	672.2	16.0
40°-50°	716.4	17.1
50°-60°	685.0	16.4
60°-70°	580.2	13.9
70°-80°	390.0	9.3
80°-90°	110.0	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°	1034.3	24.7
0°-40°	1706.5	40.7
0°-60°	3107.8	74.2
0°-90°	4188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1317	1317	1317	1317	1317	
5°	1317	1315	1309	1315	1315	125
15°	1271	1271	1269	1280	1278	358
25°	1180	1184	1192	1203	1205	544
35°	1047	1055	1072	1093	1097	656
45°	879	893	924	964	980	678
55°	679	704	766	827	856	605
65°	449	494	596	675	706	445
75°	212	289	403	472	486	227
85°	42	85	104	112	116	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.0	1317.0	1317.0	1317.0	1317.0
2.5°	1319.1	1319.1	1312.9	1317.0	1317.0
5°	1317.0	1314.9	1308.7	1314.9	1314.9
7.5°	1310.8	1308.7	1304.5	1310.8	1308.7
10°	1298.3	1298.3	1294.2	1300.4	1300.4
12.5°	1287.9	1285.8	1283.8	1292.1	1290.0
15°	1271.3	1271.3	1269.2	1279.6	1277.5
17.5°	1250.5	1252.6	1254.7	1263.0	1265.1
20°	1227.7	1231.8	1233.9	1246.4	1246.4
22.5°	1206.9	1209.0	1213.1	1225.6	1225.6
25°	1179.9	1184.1	1192.4	1202.8	1204.8
27.5°	1152.9	1155.0	1165.4	1179.9	1182.0
30°	1117.6	1123.8	1136.3	1152.9	1155.0
32.5°	1086.4	1092.7	1107.2	1123.8	1128.0
35°	1047.0	1055.3	1071.9	1092.7	1096.8
37.5°	1011.6	1017.9	1038.6	1061.5	1067.7
40°	968.0	980.5	1001.3	1028.3	1038.6
42.5°	924.4	936.9	961.8	997.1	1009.6
45°	878.7	893.2	924.4	963.9	980.5
47.5°	833.0	849.6	884.9	930.6	949.3
50°	781.1	801.8	845.5	897.4	918.2
52.5°	731.2	756.1	803.9	862.1	889.1
55°	679.3	704.2	766.5	826.8	855.8
57.5°	621.1	654.3	722.9	791.5	822.6
60°	567.1	598.3	681.4	756.1	787.3
62.5°	508.9	550.5	639.8	718.7	749.9
65°	448.7	494.4	596.2	675.1	706.3
67.5°	394.7	444.5	552.6	631.5	662.7
70°	330.3	392.6	504.8	583.7	614.9
72.5°	270.0	338.6	454.9	531.8	560.9
75°	211.9	288.7	403.0	471.5	486.1
77.5°	157.9	238.9	349.0	378.1	367.7
80°	112.2	191.1	272.1	257.6	263.8
82.5°	72.7	145.4	168.3	191.1	197.3
85°	41.5	85.2	103.9	112.2	116.3
87.5°	18.7	31.2	41.5	41.5	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)