

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: P388948

Luminaire Tested: **24CZ2-60VHE-SQR-UNV-L935-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: P388948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-SQR-UNV-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4855.6 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

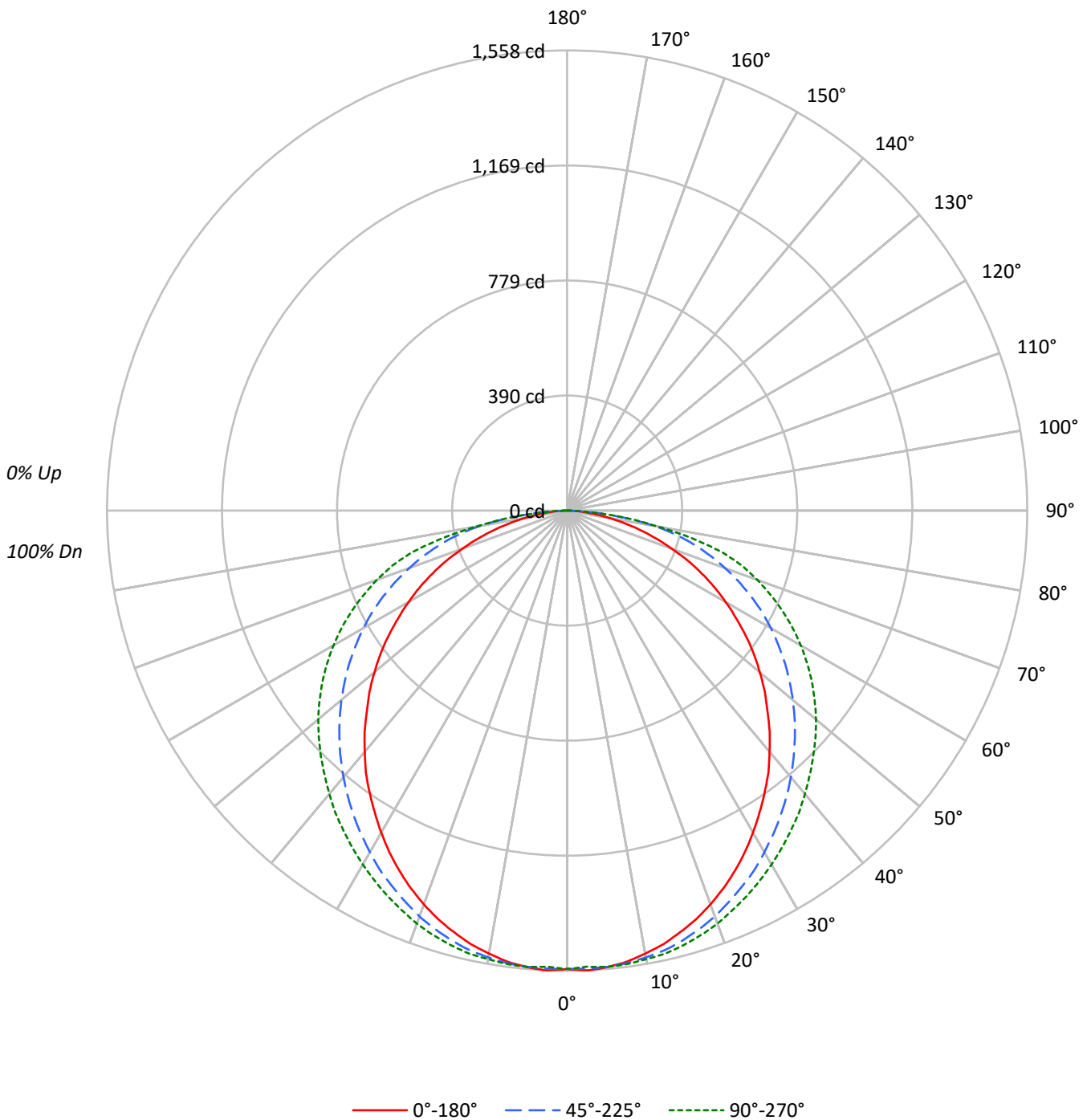
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2088	2088	2088
5°	2096	2094	2094
10°	2081	2099	2107
15°	2059	2099	2122
20°	2032	2094	2131
25°	1997	2083	2138
30°	1956	2075	2150
35°	1915	2070	2170
40°	1873	2070	2200
45°	1824	2075	2242
50°	1782	2088	2302
55°	1730	2110	2373
60°	1670	2144	2459
65°	1598	2185	2563
70°	1482	2239	2693
75°	1342	2317	2817
80°	1130	2323	2423
85°	866	1757	1757



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.3	3.0
10°-20°	423.9	8.7
20°-30°	643.8	13.3
30°-40°	783.1	16.1
40°-50°	833.8	17.2
50°-60°	794.2	16.4
60°-70°	664.1	13.7
70°-80°	442.8	9.1
80°-90°	122.5	2.5
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°	1215.1	25.0
0°-40°	1998.2	41.2
0°-60°	3626.1	74.7
0°-90°	4855.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4855.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1552	1542	1550	1550	1550	147
15°	1478	1482	1507	1518	1523	417
25°	1345	1363	1403	1427	1440	619
35°	1166	1199	1260	1302	1321	729
45°	959	1010	1090	1151	1178	741
55°	738	802	900	978	1012	659
65°	502	576	686	771	805	496
75°	258	340	446	521	542	273
85°	56	104	114	112	114	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1552.1	1552.1	1552.1	1552.1	1552.1
2.5°	1558.5	1547.3	1552.1	1552.1	1545.7
5°	1552.1	1542.5	1550.5	1550.5	1550.5
7.5°	1540.9	1532.8	1545.7	1548.9	1548.9
10°	1523.2	1520.0	1536.1	1540.9	1542.5
12.5°	1504.0	1502.4	1524.8	1531.2	1536.1
15°	1478.3	1481.5	1507.2	1518.4	1523.2
17.5°	1451.1	1457.5	1486.3	1502.4	1507.2
20°	1419.0	1428.6	1462.3	1478.3	1488.0
22.5°	1383.7	1398.2	1433.4	1452.7	1463.9
25°	1345.2	1362.9	1403.0	1427.0	1439.8
27.5°	1303.6	1326.0	1372.5	1399.8	1412.6
30°	1258.7	1284.3	1335.6	1367.7	1383.7
32.5°	1212.2	1242.6	1298.7	1334.0	1353.3
35°	1165.7	1199.3	1260.3	1302.0	1321.2
37.5°	1119.2	1152.8	1220.2	1265.1	1289.1
40°	1066.3	1106.3	1178.5	1228.2	1252.3
42.5°	1014.9	1058.2	1135.2	1189.7	1215.4
45°	958.8	1010.1	1090.3	1151.2	1178.5
47.5°	907.5	958.8	1045.4	1109.5	1140.0
50°	851.4	905.9	997.3	1067.9	1099.9
52.5°	796.9	853.0	949.2	1024.6	1056.6
55°	737.6	801.7	899.5	978.1	1011.7
57.5°	678.2	747.2	848.2	930.0	963.6
60°	620.5	691.1	796.9	878.7	913.9
62.5°	562.8	633.3	744.0	827.4	861.0
65°	501.9	575.6	686.3	771.2	804.9
67.5°	440.9	517.9	628.5	713.5	745.6
70°	376.8	458.6	569.2	652.6	684.6
72.5°	317.5	399.2	508.3	590.0	620.5
75°	258.1	339.9	445.7	521.1	541.9
77.5°	200.4	282.2	376.8	426.5	431.3
80°	145.9	222.9	299.8	314.3	312.7
82.5°	97.8	166.8	206.8	208.4	213.3
85°	56.1	104.2	113.8	112.2	113.8
87.5°	22.4	36.9	32.1	24.1	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)