

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: P388897

Luminaire Tested: **24CZ2-60-SQR-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: P388897
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: 24CZ2-60-SQR-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4728.2 lumens
Efficiency: N/A
Efficacy: 85.0 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

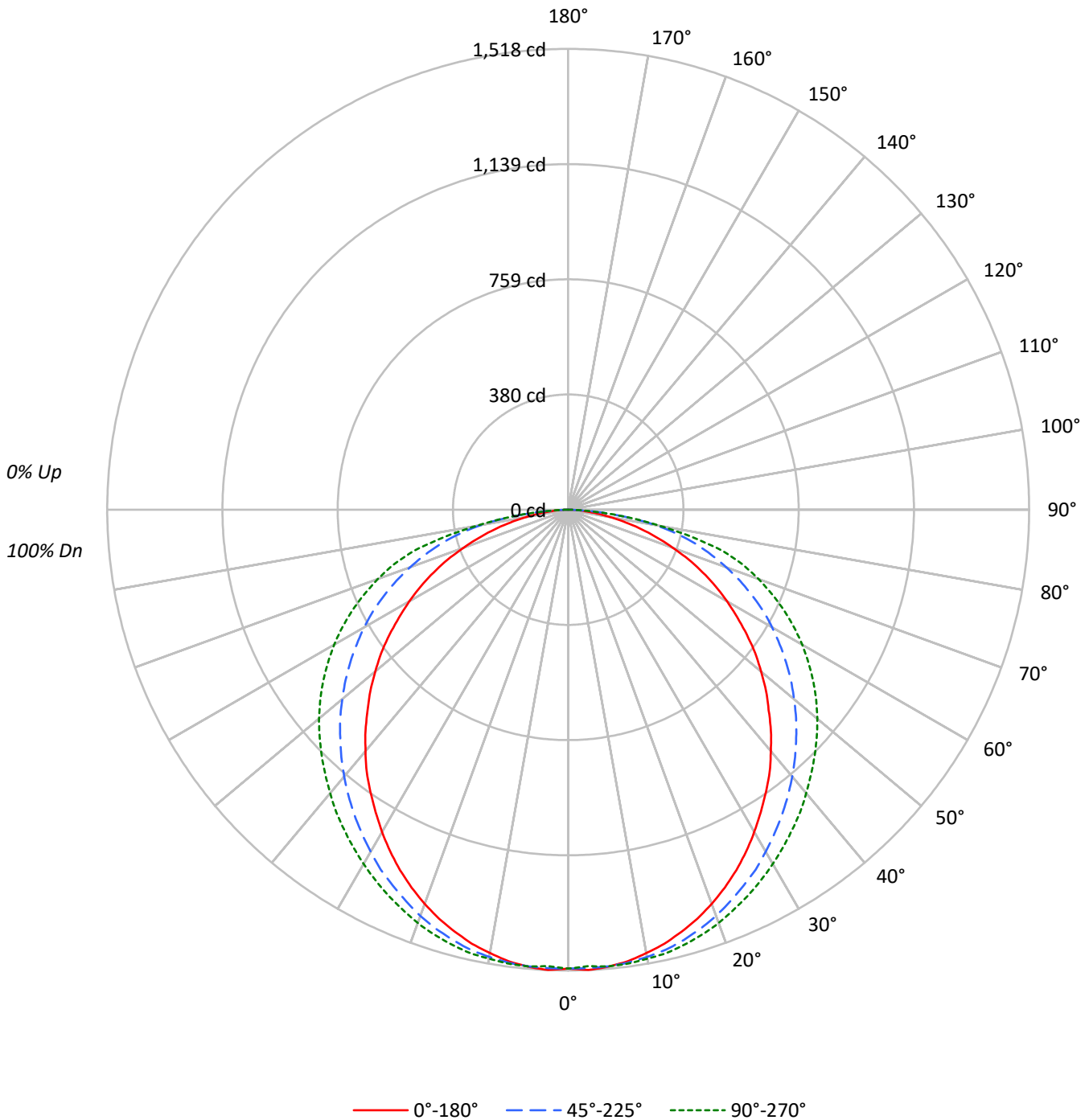
Input Watts (W): 55.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2034	2034	2034
5°	2041	2039	2039
10°	2027	2043	2052
15°	2005	2044	2066
20°	1979	2039	2075
25°	1945	2028	2082
30°	1904	2021	2093
35°	1864	2016	2113
40°	1824	2016	2142
45°	1777	2020	2184
50°	1735	2033	2242
55°	1685	2055	2311
60°	1626	2088	2395
65°	1556	2127	2495
70°	1443	2181	2623
75°	1307	2256	2743
80°	1101	2263	2359
85°	843	1712	1712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.5	3.0
10°-20°	412.8	8.7
20°-30°	627.0	13.3
30°-40°	762.6	16.1
40°-50°	811.9	17.2
50°-60°	773.3	16.4
60°-70°	646.7	13.7
70°-80°	431.2	9.1
80°-90°	119.3	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°	1183.2	25.0
0°-40°	1945.8	41.2
0°-60°	3531.0	74.7
0°-90°	4728.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4728.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1511	1511	1511	1511	1511	
5°	1511	1502	1510	1510	1510	143
15°	1440	1443	1468	1479	1483	406
25°	1310	1327	1366	1390	1402	603
35°	1135	1168	1227	1268	1286	710
45°	934	984	1062	1121	1148	722
55°	718	781	876	952	985	642
65°	489	560	668	751	784	483
75°	251	331	434	507	528	266
85°	55	102	111	109	111	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1517.6	1506.7	1511.4	1511.4	1505.1
5°	1511.4	1502.0	1509.8	1509.8	1509.8
7.5°	1500.4	1492.6	1505.1	1508.2	1508.2
10°	1483.3	1480.1	1495.7	1500.4	1502.0
12.5°	1464.5	1463.0	1484.8	1491.1	1495.7
15°	1439.5	1442.7	1467.6	1478.6	1483.3
17.5°	1413.0	1419.2	1447.3	1463.0	1467.6
20°	1381.8	1391.1	1423.9	1439.5	1448.9
22.5°	1347.4	1361.5	1395.8	1414.6	1425.5
25°	1310.0	1327.1	1366.2	1389.6	1402.1
27.5°	1269.4	1291.2	1336.5	1363.0	1375.5
30°	1225.6	1250.6	1300.6	1331.8	1347.4
32.5°	1180.4	1210.0	1264.7	1299.0	1317.8
35°	1135.1	1167.9	1227.2	1267.8	1286.5
37.5°	1089.8	1122.6	1188.2	1231.9	1255.3
40°	1038.3	1077.3	1147.6	1196.0	1219.4
42.5°	988.3	1030.5	1105.4	1158.5	1183.5
45°	933.7	983.6	1061.7	1121.0	1147.6
47.5°	883.7	933.7	1018.0	1080.4	1110.1
50°	829.1	882.1	971.1	1039.8	1071.1
52.5°	776.0	830.6	924.3	997.7	1028.9
55°	718.2	780.7	875.9	952.4	985.2
57.5°	660.4	727.6	825.9	905.6	938.4
60°	604.2	672.9	776.0	855.6	890.0
62.5°	548.0	616.7	724.5	805.6	838.4
65°	488.7	560.5	668.2	751.0	783.8
67.5°	429.4	504.3	612.0	694.8	726.0
70°	366.9	446.5	554.3	635.5	666.7
72.5°	309.1	388.8	494.9	574.6	604.2
75°	251.4	331.0	434.0	507.4	527.7
77.5°	195.2	274.8	366.9	415.3	420.0
80°	142.1	217.0	292.0	306.0	304.5
82.5°	95.2	162.4	201.4	203.0	207.7
85°	54.6	101.5	110.9	109.3	110.9
87.5°	21.9	35.9	31.2	23.4	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)