

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: P230080

Luminaire Tested: **24CZ-LD5-45SE-S-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230080
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-45SE-S-UNV-L930-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3863.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

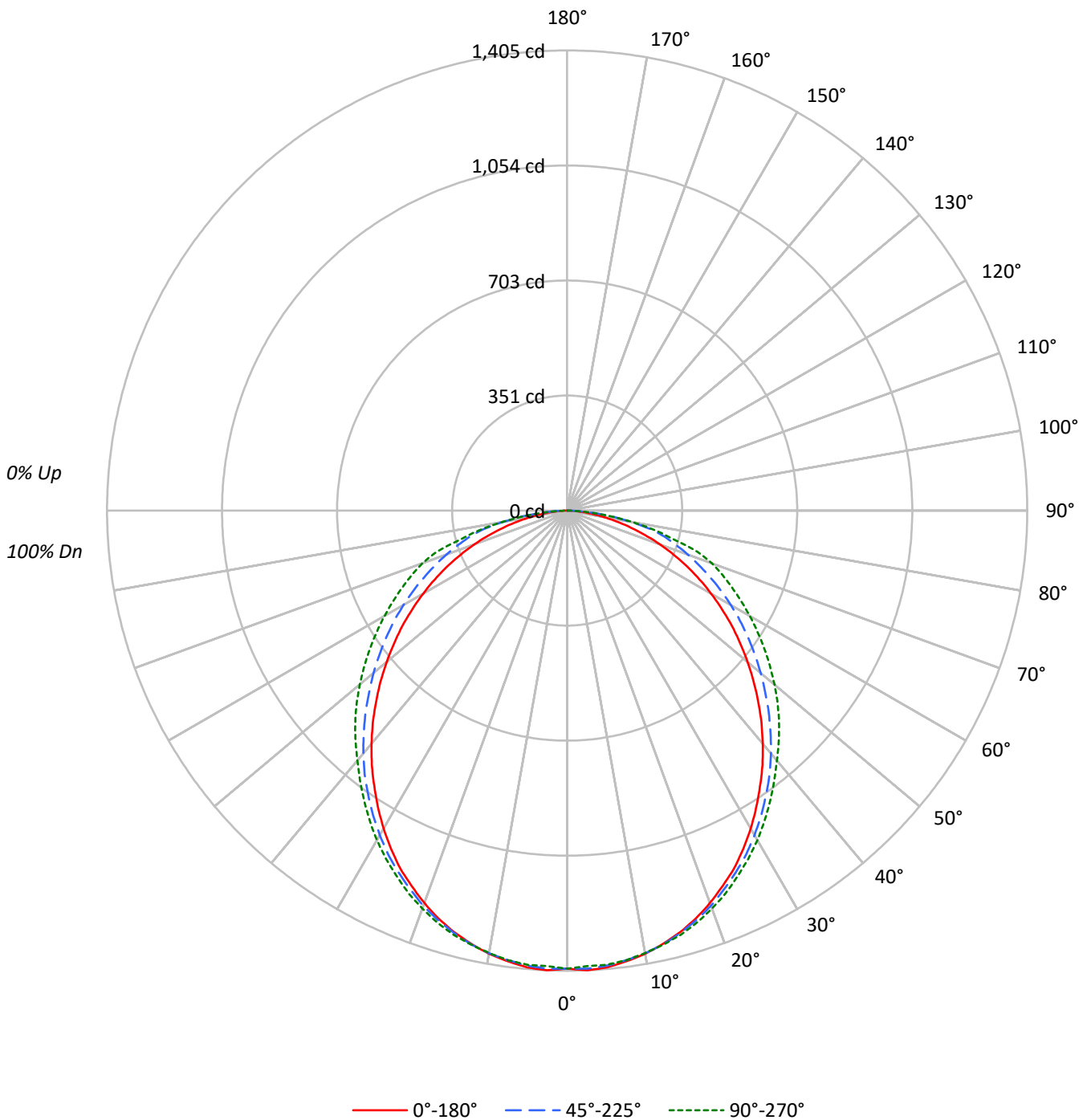
Input Watts (W): 39.91
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1882	1882	1882
5°	1891	1884	1880
10°	1877	1876	1874
15°	1857	1860	1867
20°	1826	1839	1852
25°	1790	1809	1828
30°	1741	1777	1805
35°	1687	1740	1776
40°	1632	1700	1750
45°	1570	1656	1741
50°	1507	1614	1730
55°	1441	1580	1725
60°	1366	1553	1733
65°	1285	1535	1768
70°	1183	1542	1851
75°	1049	1597	1724
80°	876	1514	1554
85°	655	1210	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.2	3.4
10°-20°	376.0	9.7
20°-30°	560.4	14.5
30°-40°	659.7	17.1
40°-50°	670.4	17.4
50°-60°	602.7	15.6
60°-70°	476.2	12.3
70°-80°	302.1	7.8
80°-90°	83.4	2.2
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°	1068.7	27.7
0°-40°	1728.3	44.7
0°-60°	3001.4	77.7
0°-90°	3863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1400	1388	1395	1392	1392	133
15°	1333	1326	1336	1339	1341	375
25°	1206	1204	1218	1226	1231	554
35°	1027	1033	1059	1071	1081	643
45°	825	837	870	896	915	637
55°	614	630	674	717	735	549
65°	404	424	482	535	555	400
75°	202	236	307	334	332	215
85°	42	73	78	72	72	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1398.5	1398.5	1398.5	1398.5	1398.5
2.5°	1404.9	1394.6	1399.8	1397.2	1392.1
5°	1399.8	1388.2	1394.6	1392.1	1392.1
7.5°	1388.2	1379.2	1384.3	1383.1	1384.3
10°	1374.1	1365.1	1372.8	1372.8	1371.5
12.5°	1354.8	1347.1	1356.1	1356.1	1357.3
15°	1332.9	1326.5	1335.5	1339.4	1340.6
17.5°	1305.9	1299.5	1311.1	1314.9	1318.8
20°	1275.1	1272.5	1284.1	1287.9	1293.1
22.5°	1240.4	1240.4	1251.9	1257.1	1264.8
25°	1205.7	1204.4	1218.5	1226.2	1231.4
27.5°	1164.5	1165.8	1183.8	1191.5	1198.0
30°	1120.8	1123.4	1144.0	1153.0	1162.0
32.5°	1074.6	1079.7	1102.8	1113.1	1122.1
35°	1027.0	1033.4	1059.1	1070.7	1081.0
37.5°	979.4	988.4	1015.4	1027.0	1038.6
40°	929.3	937.0	967.9	982.0	996.2
42.5°	877.9	888.2	919.0	939.6	956.3
45°	825.2	836.8	870.2	895.9	915.2
47.5°	772.5	787.9	820.1	854.8	871.5
50°	719.8	735.2	771.2	809.8	826.5
52.5°	665.8	681.2	722.4	762.2	780.2
55°	614.4	629.8	673.5	717.2	735.2
57.5°	560.4	577.1	626.0	671.0	689.0
60°	507.7	524.4	577.1	624.7	644.0
62.5°	456.3	474.3	529.6	579.7	599.0
65°	403.6	424.2	482.0	534.7	555.3
67.5°	352.2	375.3	435.7	491.0	512.9
70°	300.8	327.8	392.0	448.6	470.4
72.5°	250.6	280.2	348.3	404.9	416.5
75°	201.8	236.5	307.2	334.2	331.6
77.5°	155.5	194.1	260.9	266.1	273.8
80°	113.1	155.5	195.4	205.7	200.5
82.5°	74.6	117.0	140.1	135.0	133.7
85°	42.4	73.3	78.4	72.0	72.0
87.5°	18.0	29.6	25.7	19.3	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)