

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: P230082

Luminaire Tested: **24CZ-LD5-45SE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230082
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-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4115.0 lumens
Efficiency: N/A
Efficacy: 103.1 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

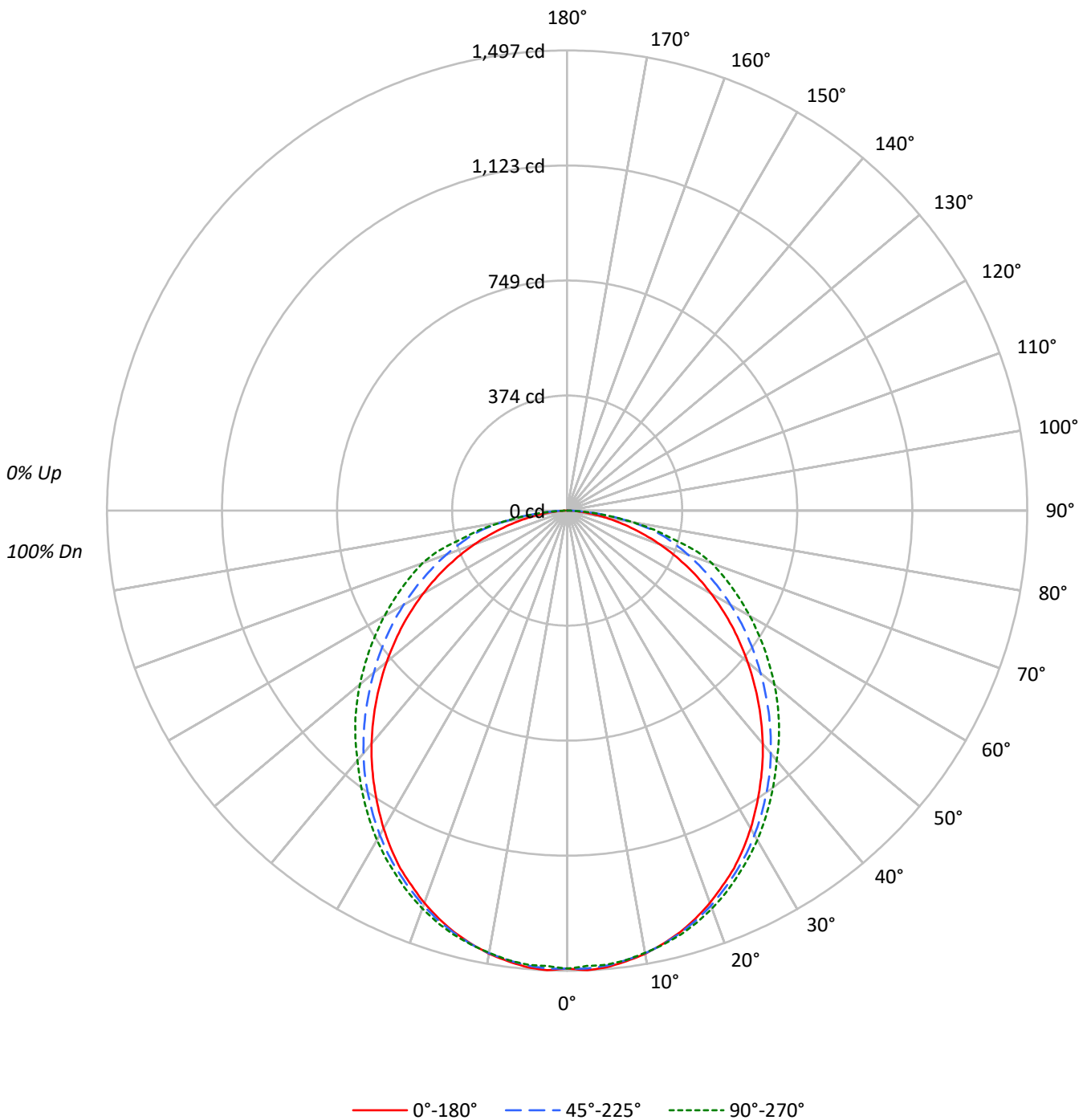
Input Watts (W): 39.91
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2004	2004	2004
5°	2014	2006	2003
10°	2000	1998	1996
15°	1978	1982	1989
20°	1945	1958	1972
25°	1907	1927	1947
30°	1855	1893	1923
35°	1797	1853	1891
40°	1739	1811	1864
45°	1673	1764	1855
50°	1605	1720	1843
55°	1535	1683	1837
60°	1455	1654	1846
65°	1369	1635	1883
70°	1260	1643	1971
75°	1118	1701	1837
80°	934	1612	1655
85°	698	1289	1184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	3.4
10°-20°	400.6	9.7
20°-30°	597.0	14.5
30°-40°	702.7	17.1
40°-50°	714.1	17.4
50°-60°	642.0	15.6
60°-70°	507.2	12.3
70°-80°	321.8	7.8
80°-90°	88.8	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°	1138.4	27.7
0°-40°	1841.1	44.7
0°-60°	3197.2	77.7
0°-90°	4115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1490	1490	1490	1490	1490	
5°	1491	1479	1486	1483	1483	141
15°	1420	1413	1423	1427	1428	400
25°	1284	1283	1298	1306	1312	591
35°	1094	1101	1128	1141	1152	684
45°	879	891	927	954	975	678
55°	654	671	718	764	783	584
65°	430	452	514	570	592	426
75°	215	252	327	356	353	229
85°	45	78	84	77	77	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1489.7	1489.7	1489.7	1489.7	1489.7
2.5°	1496.6	1485.6	1491.1	1488.3	1482.9
5°	1491.1	1478.8	1485.6	1482.9	1482.9
7.5°	1478.8	1469.2	1474.6	1473.3	1474.6
10°	1463.7	1454.1	1462.3	1462.3	1461.0
12.5°	1443.2	1434.9	1444.5	1444.5	1445.9
15°	1419.9	1413.0	1422.6	1426.7	1428.1
17.5°	1391.1	1384.3	1396.6	1400.7	1404.8
20°	1358.3	1355.5	1367.8	1372.0	1377.4
22.5°	1321.3	1321.3	1333.6	1339.1	1347.3
25°	1284.3	1283.0	1298.0	1306.2	1311.7
27.5°	1240.5	1241.9	1261.0	1269.3	1276.1
30°	1194.0	1196.7	1218.6	1228.2	1237.8
32.5°	1144.7	1150.1	1174.8	1185.7	1195.3
35°	1094.0	1100.8	1128.2	1140.6	1151.5
37.5°	1043.3	1052.9	1081.7	1094.0	1106.3
40°	989.9	998.2	1031.0	1046.1	1061.1
42.5°	935.2	946.1	979.0	1000.9	1018.7
45°	879.0	891.4	927.0	954.3	974.9
47.5°	822.9	839.3	873.6	910.5	928.3
50°	766.8	783.2	821.5	862.6	880.4
52.5°	709.3	725.7	769.5	811.9	831.1
55°	654.5	670.9	717.5	764.0	783.2
57.5°	597.0	614.8	666.8	714.7	733.9
60°	540.8	558.6	614.8	665.4	686.0
62.5°	486.1	505.2	564.1	617.5	638.1
65°	429.9	451.8	513.5	569.6	591.5
67.5°	375.2	399.8	464.2	523.0	546.3
70°	320.4	349.1	417.6	477.9	501.1
72.5°	267.0	298.5	371.1	431.3	443.6
75°	215.0	251.9	327.2	356.0	353.3
77.5°	165.7	206.8	278.0	283.4	291.6
80°	120.5	165.7	208.1	219.1	213.6
82.5°	79.4	124.6	149.2	143.8	142.4
85°	45.2	78.0	83.5	76.7	76.7
87.5°	19.2	31.5	27.4	20.5	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)