

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: P230040

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230040  
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-LD5-45-S-UNV-L930-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3776.0 lumens  
Efficiency: N/A  
Efficacy: 105.8 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

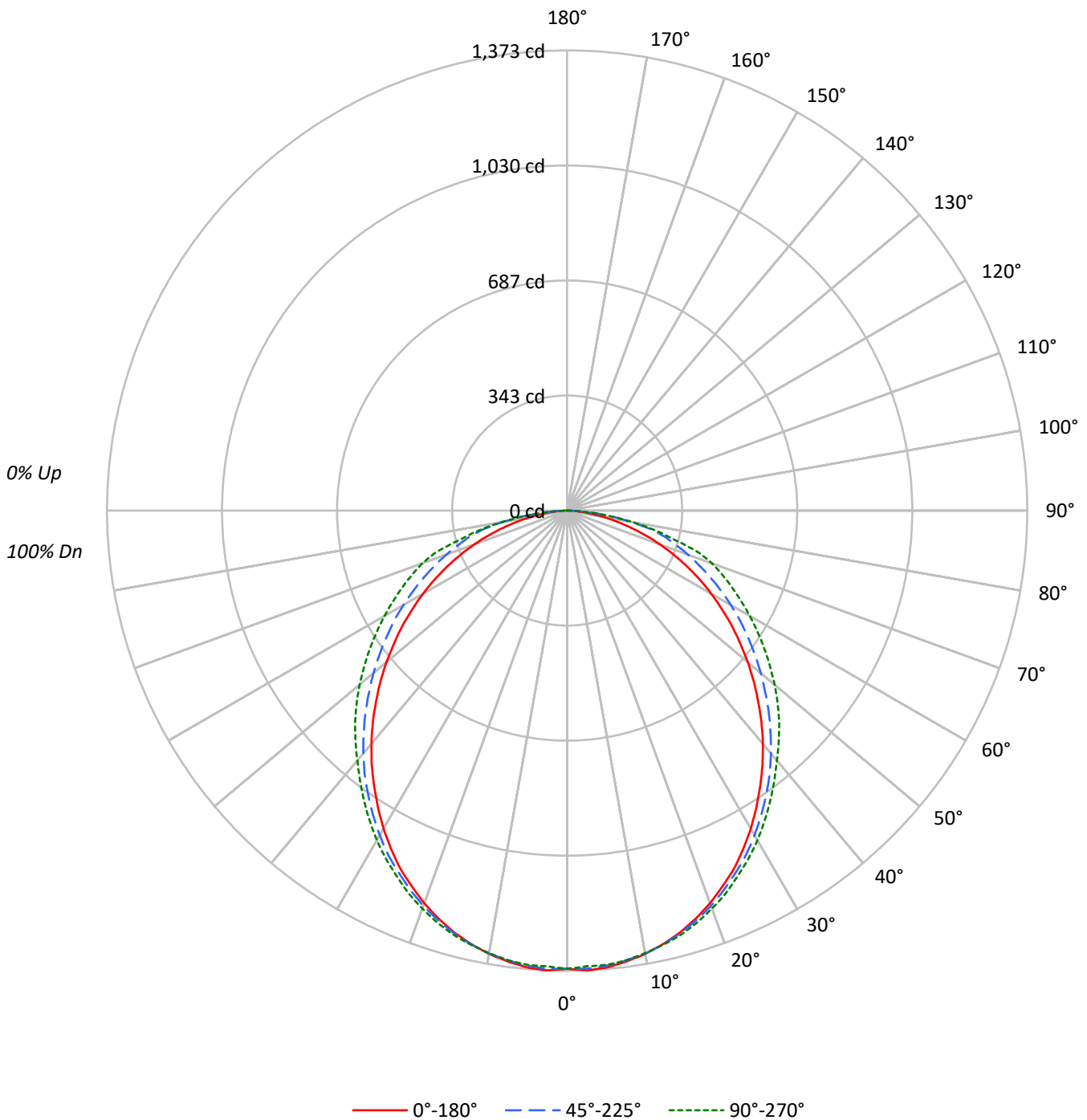
Input Watts (W): 35.69  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1839	1839	1839
5°	1848	1841	1838
10°	1835	1833	1832
15°	1815	1818	1825
20°	1785	1797	1810
25°	1750	1768	1787
30°	1702	1737	1765
35°	1649	1701	1736
40°	1596	1662	1710
45°	1535	1619	1702
50°	1473	1578	1691
55°	1409	1544	1686
60°	1336	1518	1694
65°	1256	1500	1728
70°	1157	1507	1809
75°	1026	1561	1685
80°	857	1480	1519
85°	641	1183	1087



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	3.4
10°-20°	367.6	9.7
20°-30°	547.8	14.5
30°-40°	644.8	17.1
40°-50°	655.3	17.4
50°-60°	589.1	15.6
60°-70°	465.4	12.3
70°-80°	295.3	7.8
80°-90°	81.5	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°	1044.6	27.7
0°-40°	1689.4	44.7
0°-60°	2933.8	77.7
0°-90°	3776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3776.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1367	1367	1367	1367	1367	
5°	1368	1357	1363	1361	1361	130
15°	1303	1297	1305	1309	1310	367
25°	1178	1177	1191	1199	1204	542
35°	1004	1010	1035	1047	1057	628
45°	807	818	851	876	895	622
55°	601	616	658	701	719	536
65°	394	415	471	523	543	391
75°	197	231	300	327	324	210
85°	42	72	77	70	70	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1367.0	1367.0	1367.0	1367.0	1367.0
2.5°	1373.3	1363.2	1368.2	1365.7	1360.7
5°	1368.2	1356.9	1363.2	1360.7	1360.7
7.5°	1356.9	1348.1	1353.2	1351.9	1353.2
10°	1343.1	1334.3	1341.9	1341.9	1340.6
12.5°	1324.3	1316.7	1325.5	1325.5	1326.8
15°	1302.9	1296.6	1305.4	1309.2	1310.4
17.5°	1276.5	1270.2	1281.5	1285.3	1289.1
20°	1246.4	1243.9	1255.2	1258.9	1264.0
22.5°	1212.4	1212.4	1223.7	1228.8	1236.3
25°	1178.5	1177.3	1191.1	1198.6	1203.6
27.5°	1138.3	1139.6	1157.2	1164.7	1171.0
30°	1095.6	1098.1	1118.2	1127.0	1135.8
32.5°	1050.4	1055.4	1078.0	1088.1	1096.9
35°	1003.9	1010.2	1035.3	1046.6	1056.6
37.5°	957.4	966.2	992.6	1003.9	1015.2
40°	908.4	915.9	946.1	959.9	973.7
42.5°	858.1	868.2	898.3	918.4	934.8
45°	806.6	817.9	850.6	875.7	894.6
47.5°	755.1	770.2	801.6	835.5	851.9
50°	703.6	718.7	753.9	791.5	807.9
52.5°	650.8	665.9	706.1	745.1	762.6
55°	600.6	615.6	658.4	701.1	718.7
57.5°	547.8	564.1	611.9	655.8	673.4
60°	496.3	512.6	564.1	610.6	629.5
62.5°	446.0	463.6	517.6	566.6	585.5
65°	394.5	414.6	471.2	522.7	542.8
67.5°	344.3	366.9	425.9	480.0	501.3
70°	294.0	320.4	383.2	438.5	459.8
72.5°	245.0	273.9	340.5	395.8	407.1
75°	197.3	231.2	300.3	326.7	324.2
77.5°	152.0	189.7	255.1	260.1	267.6
80°	110.6	152.0	191.0	201.0	196.0
82.5°	72.9	114.3	136.9	131.9	130.7
85°	41.5	71.6	76.6	70.4	70.4
87.5°	17.6	28.9	25.1	18.8	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)