

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: P389709

Luminaire Tested: **24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-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: P389709  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2982.5 lumens  
Efficiency: N/A  
Efficacy: 130.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

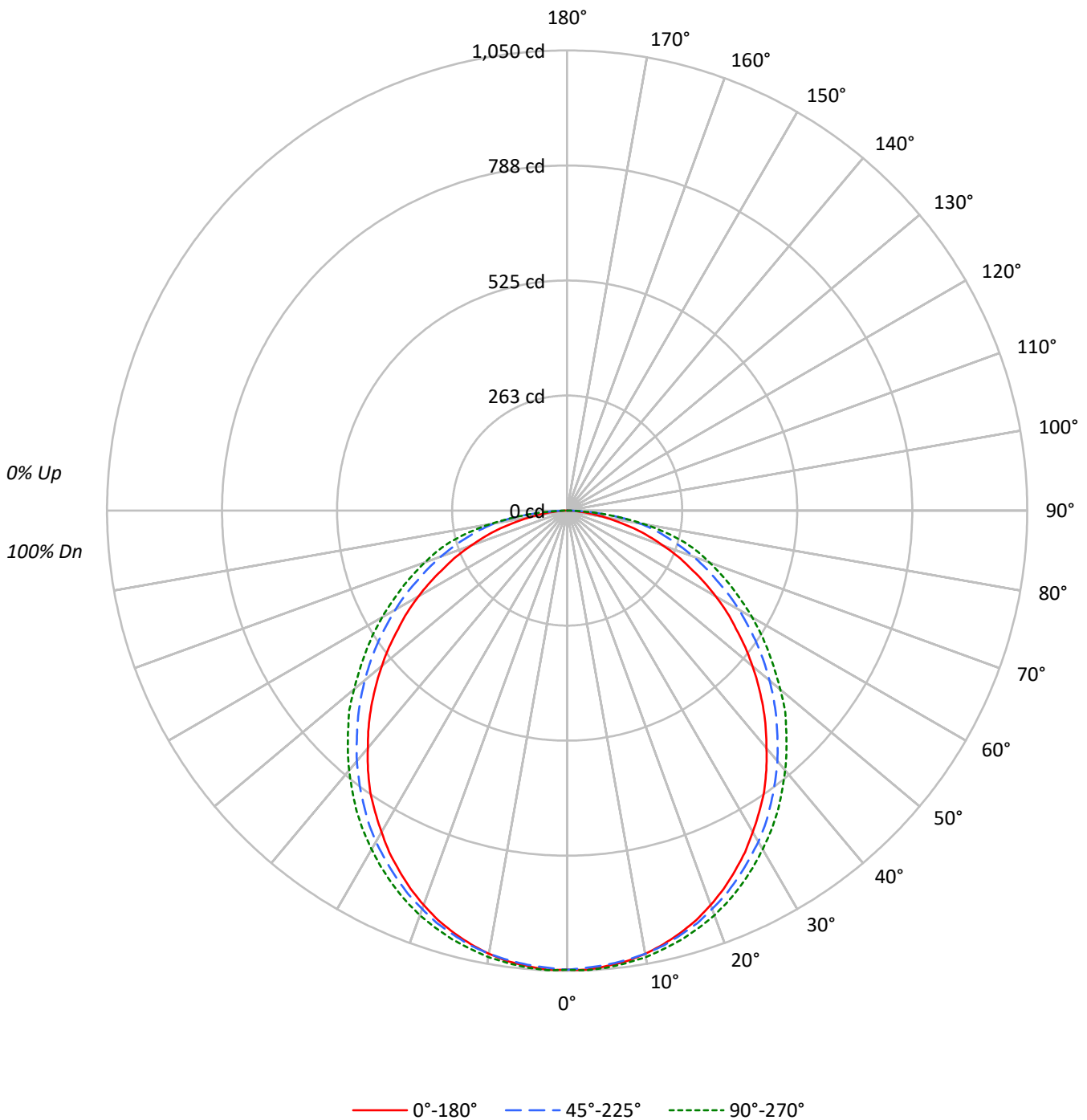
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389709

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389709

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-U

**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1410	1410	1410
5°	1409	1405	1414
10°	1403	1403	1413
15°	1390	1396	1411
20°	1371	1385	1407
25°	1346	1371	1398
30°	1316	1356	1386
35°	1287	1334	1376
40°	1243	1311	1359
45°	1202	1285	1345
50°	1156	1261	1329
55°	1104	1238	1316
60°	1053	1218	1313
65°	986	1197	1321
70°	913	1204	1356
75°	818	1226	1433
80°	661	1299	1402
85°	497	1141	1112



TEST NUMBER: P389709

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.2	3.3
10°-20°	283.4	9.5
20°-30°	426.1	14.3
30°-40°	507.5	17.0
40°-50°	519.4	17.4
50°-60°	467.6	15.7
60°-70°	367.2	12.3
70°-80°	238.3	8.0
80°-90°	73.7	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°	808.7	27.1
0°-40°	1316.2	44.1
0°-60°	2303.2	77.2
0°-90°	2982.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2982.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1043	1045	1040	1046	1047	99
15°	998	1000	1002	1011	1013	281
25°	907	914	924	939	942	418
35°	784	793	812	832	838	489
45°	632	647	676	701	707	487
55°	471	492	528	555	561	422
65°	310	334	376	407	415	308
75°	157	188	236	268	276	166
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



TEST NUMBER: P389709

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1047.8	1047.8	1047.8	1047.8	1047.8
2.5°	1048.7	1048.7	1044.0	1048.7	1049.7
5°	1043.0	1044.9	1040.2	1045.9	1046.8
7.5°	1037.4	1037.4	1034.5	1040.2	1041.1
10°	1026.9	1027.9	1026.9	1033.6	1034.5
12.5°	1013.7	1015.6	1016.5	1023.1	1024.1
15°	997.6	1000.4	1002.3	1010.8	1012.7
17.5°	979.6	982.4	987.1	996.6	998.5
20°	957.8	961.6	967.2	979.6	982.4
22.5°	934.1	937.9	947.4	958.7	963.5
25°	906.6	914.2	923.7	938.8	941.7
27.5°	879.1	885.8	898.1	914.2	918.0
30°	846.9	857.4	872.5	888.6	892.4
32.5°	815.7	826.1	844.1	861.1	865.9
35°	783.5	792.9	811.9	831.8	837.5
37.5°	746.5	758.8	779.7	799.6	805.2
40°	707.7	722.8	746.5	767.4	774.0
42.5°	670.7	686.8	710.5	733.3	740.8
45°	631.9	647.0	675.5	701.0	706.7
47.5°	592.1	609.1	639.5	665.0	674.5
50°	552.3	570.3	602.5	629.0	634.7
52.5°	512.5	531.5	565.6	594.0	596.8
55°	470.8	491.7	527.7	555.1	560.8
57.5°	432.9	450.9	489.8	518.2	524.8
60°	391.3	411.2	452.8	479.4	487.9
62.5°	351.5	372.3	415.9	442.4	450.0
65°	309.8	333.5	376.1	407.4	414.9
67.5°	273.8	296.5	342.0	372.3	379.9
70°	232.1	257.7	306.0	337.3	344.8
72.5°	196.1	222.6	270.9	301.3	312.6
75°	157.3	187.6	235.9	268.1	275.7
77.5°	119.4	154.4	203.7	228.3	228.3
80°	85.3	122.2	167.7	179.0	180.9
82.5°	55.9	91.9	124.1	123.2	123.2
85°	32.2	59.7	73.9	72.0	72.0
87.5°	12.3	24.6	26.5	26.5	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)