

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: P389690

Luminaire Tested: **24CZ2-30VHE-S-UNV-L935-CD1-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: P389690  
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: 24CZ2-30VHE-S-UNV-L935-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2674.9 lumens  
Efficiency: N/A  
Efficacy: 131.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

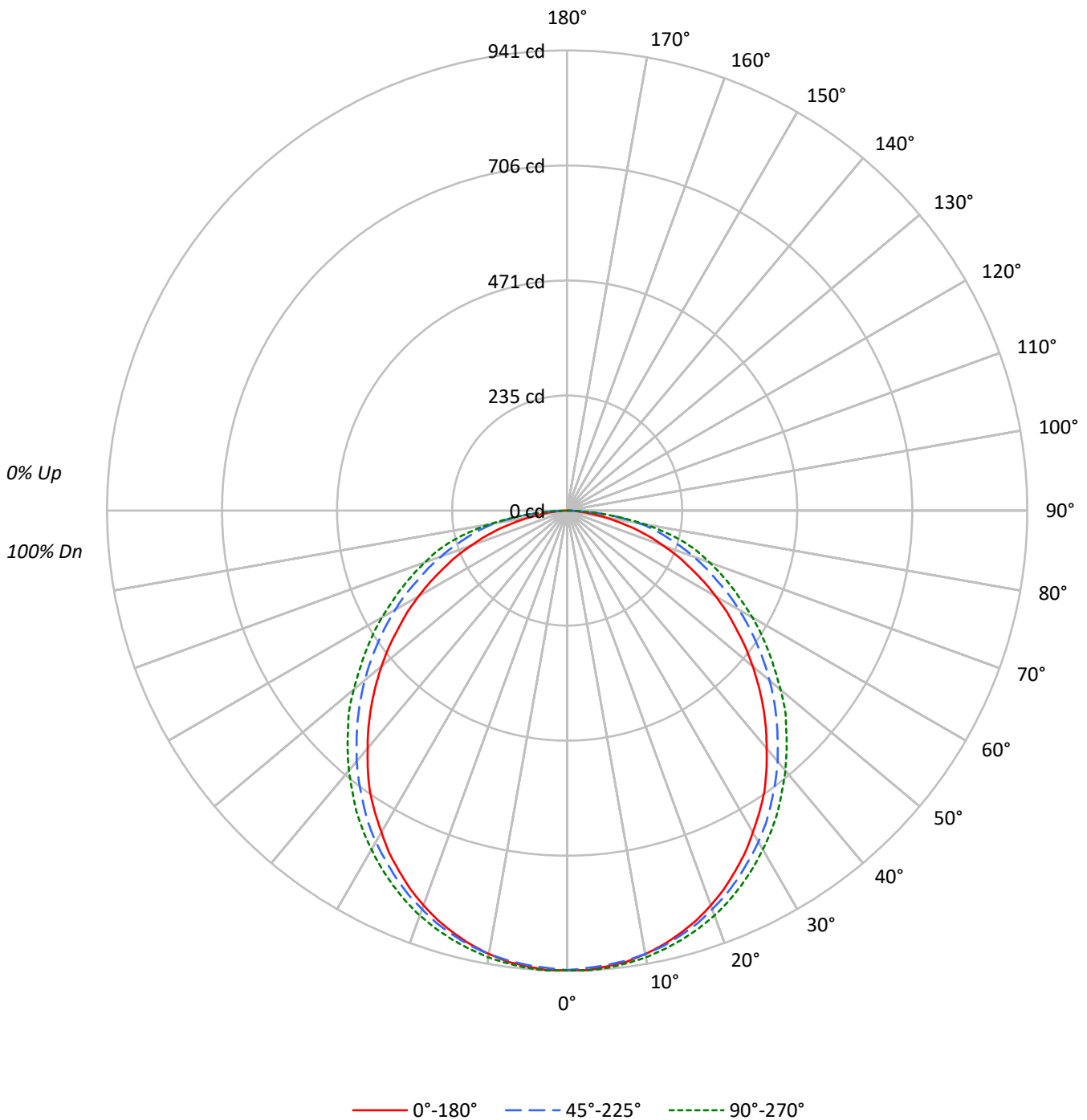
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389690

CATALOG NUMBER: 24CZ2-30VHE-S-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389690

CATALOG NUMBER: 24CZ2-30VHE-S-UNV-L935-CD1-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°	1264	1264	1264
5°	1264	1260	1268
10°	1258	1258	1268
15°	1246	1252	1265
20°	1230	1242	1262
25°	1207	1230	1254
30°	1180	1216	1244
35°	1154	1196	1234
40°	1115	1176	1219
45°	1078	1153	1206
50°	1037	1131	1192
55°	991	1110	1180
60°	944	1093	1178
65°	884	1074	1185
70°	819	1079	1217
75°	733	1100	1285
80°	593	1165	1258
85°	446	1024	997



TEST NUMBER: P389690

CATALOG NUMBER: 24CZ2-30VHE-S-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	3.3
10°-20°	254.2	9.5
20°-30°	382.1	14.3
30°-40°	455.2	17.0
40°-50°	465.8	17.4
50°-60°	419.4	15.7
60°-70°	329.3	12.3
70°-80°	213.8	8.0
80°-90°	66.1	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°	725.3	27.1
0°-40°	1180.4	44.1
0°-60°	2065.7	77.2
0°-90°	2674.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2674.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	936	937	933	938	939	89
15°	895	897	899	907	908	252
25°	813	820	828	842	844	375
35°	703	711	728	746	751	438
45°	567	580	606	629	634	437
55°	422	441	473	498	503	379
65°	278	299	337	365	372	277
75°	141	168	212	240	247	149
85°	29	54	66	65	65	35
90°	0	0	0	0	0	



TEST NUMBER: P389690

CATALOG NUMBER: 24CZ2-30VHE-S-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	939.7	939.7	939.7	939.7	939.7
2.5°	940.6	940.6	936.3	940.6	941.4
5°	935.5	937.2	932.9	938.0	938.9
7.5°	930.4	930.4	927.8	932.9	933.8
10°	921.0	921.9	921.0	927.0	927.8
12.5°	909.1	910.8	911.7	917.6	918.5
15°	894.7	897.2	898.9	906.6	908.3
17.5°	878.5	881.1	885.3	893.8	895.5
20°	859.0	862.4	867.5	878.5	881.1
22.5°	837.8	841.2	849.6	859.8	864.1
25°	813.1	819.9	828.4	842.0	844.5
27.5°	788.5	794.4	805.5	819.9	823.3
30°	759.6	768.9	782.5	797.0	800.4
32.5°	731.5	740.9	757.0	772.3	776.6
35°	702.7	711.2	728.1	746.0	751.1
37.5°	669.5	680.6	699.3	717.1	722.2
40°	634.7	648.3	669.5	688.2	694.2
42.5°	601.6	616.0	637.2	657.6	664.4
45°	566.7	580.3	605.8	628.7	633.8
47.5°	531.0	546.3	573.5	596.5	604.9
50°	495.3	511.5	540.4	564.2	569.3
52.5°	459.7	476.7	507.2	532.7	535.3
55°	422.3	441.0	473.3	497.9	503.0
57.5°	388.3	404.4	439.3	464.8	470.7
60°	350.9	368.7	406.1	429.9	437.6
62.5°	315.2	333.9	373.0	396.8	403.6
65°	277.8	299.1	337.3	365.3	372.1
67.5°	245.5	265.9	306.7	333.9	340.7
70°	208.2	231.1	274.4	302.5	309.3
72.5°	175.9	199.7	243.0	270.2	280.4
75°	141.0	168.2	211.6	240.5	247.2
77.5°	107.1	138.5	182.7	204.8	204.8
80°	76.5	109.6	150.4	160.6	162.3
82.5°	50.1	82.4	111.3	110.5	110.5
85°	28.9	53.5	66.3	64.6	64.6
87.5°	11.0	22.1	23.8	23.8	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)