

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: P388756

Luminaire Tested: **24CZ2-30VHE-UNV-L940-CD1-SWPD1-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: P388756  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30VHE-UNV-L940-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2540.2 lumens  
Efficiency: N/A  
Efficacy: 124.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

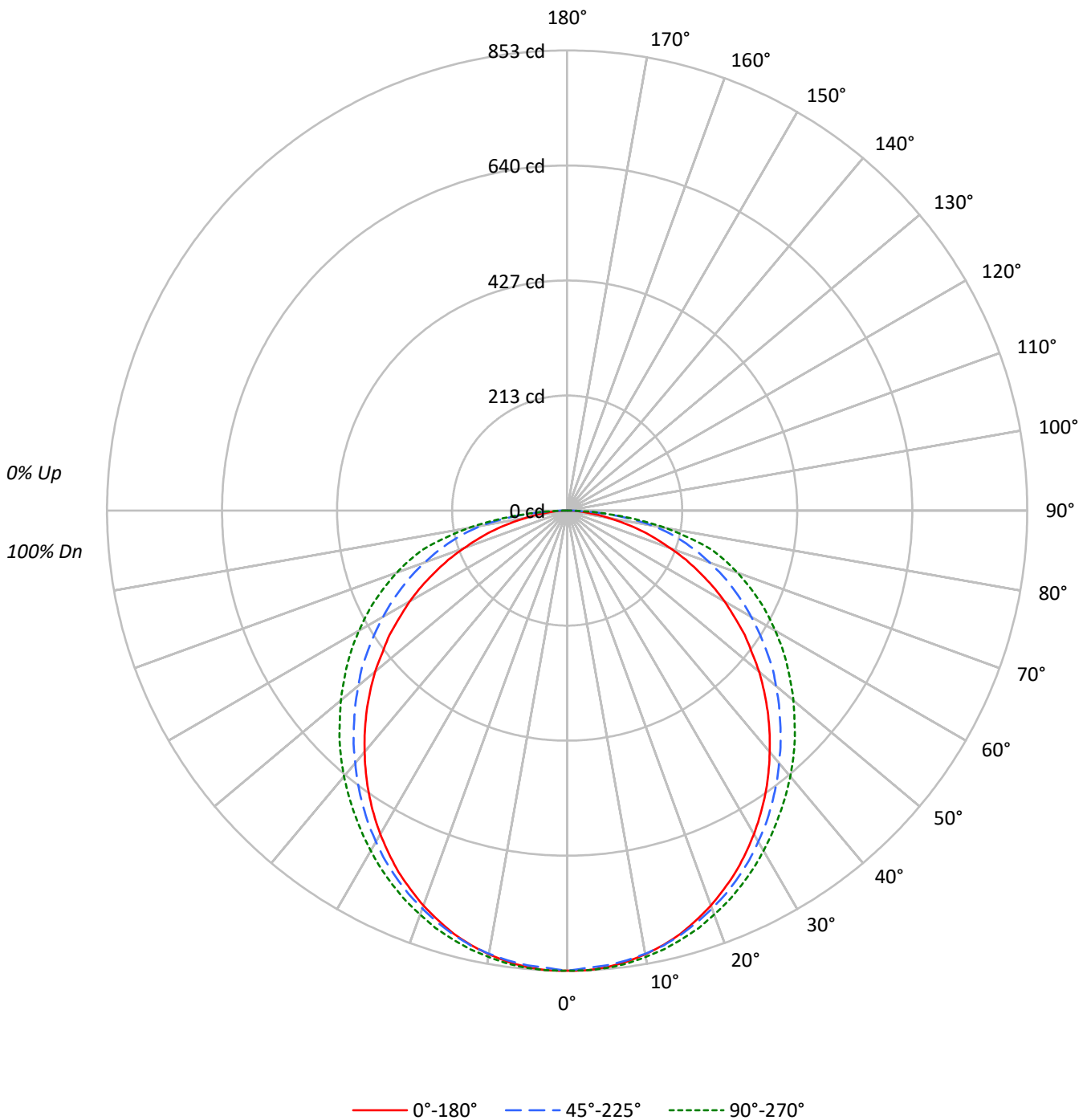
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1148	1148	1148
5°	1147	1143	1150
10°	1141	1140	1148
15°	1131	1134	1145
20°	1116	1124	1141
25°	1098	1114	1136
30°	1076	1101	1131
35°	1053	1088	1128
40°	1026	1074	1130
45°	1000	1063	1136
50°	973	1058	1146
55°	943	1056	1167
60°	906	1061	1198
65°	858	1077	1250
70°	797	1104	1321
75°	727	1159	1432
80°	597	1248	1432
85°	459	1152	1230



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.7	3.2
10°-20°	230.3	9.1
20°-30°	346.5	13.6
30°-40°	415.3	16.3
40°-50°	432.8	17.0
50°-60°	402.6	15.9
60°-70°	331.6	13.1
70°-80°	225.8	8.9
80°-90°	74.6	2.9
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°	657.5	25.9
0°-40°	1072.7	42.2
0°-60°	1908.1	75.1
0°-90°	2540.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2540.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	850	850	846	850	851	81
15°	812	813	814	822	822	229
25°	739	743	750	763	766	340
35°	641	648	662	680	687	401
45°	526	537	559	587	597	405
55°	402	415	450	486	498	358
65°	270	292	338	378	392	268
75°	140	171	223	263	276	147
85°	30	58	75	80	80	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	852.9	852.9	852.9	852.9	852.9
2.5°	852.9	852.9	848.6	852.9	852.9
5°	849.5	849.5	846.1	850.3	851.2
7.5°	843.5	844.4	841.0	846.1	846.9
10°	835.1	835.9	834.2	839.3	840.1
12.5°	824.9	825.7	825.7	831.7	832.5
15°	812.2	813.0	813.9	821.5	822.3
17.5°	796.1	798.6	800.3	809.6	811.3
20°	779.1	781.7	785.0	795.2	796.9
22.5°	759.6	763.0	768.9	780.0	782.5
25°	739.3	742.7	750.3	763.0	765.5
27.5°	716.4	721.5	730.8	744.3	747.7
30°	692.6	697.7	708.7	723.2	728.2
32.5°	667.2	674.0	686.7	702.8	707.9
35°	640.9	648.5	662.1	679.9	686.7
37.5°	612.9	621.4	637.5	657.0	665.5
40°	584.1	594.3	611.2	634.1	643.5
42.5°	555.3	564.6	585.8	610.4	620.6
45°	525.6	536.6	558.7	586.7	596.8
47.5°	495.1	506.1	532.4	562.1	571.4
50°	464.6	475.6	505.3	536.6	547.7
52.5°	431.5	445.9	479.8	511.2	522.2
55°	401.8	415.4	450.2	485.8	497.6
57.5°	367.9	384.0	422.2	459.5	472.2
60°	336.6	353.5	394.2	432.4	445.1
62.5°	304.4	323.0	366.2	405.2	419.6
65°	269.6	292.5	338.3	378.1	392.5
67.5°	238.2	262.0	310.3	351.0	363.7
70°	202.6	231.4	280.6	321.3	335.7
72.5°	172.1	200.9	252.6	292.5	306.9
75°	139.9	171.3	223.0	262.8	275.5
77.5°	107.7	142.4	194.1	224.7	228.9
80°	77.1	113.6	161.1	178.9	184.8
82.5°	54.3	87.3	118.7	130.6	133.9
85°	29.7	57.6	74.6	79.7	79.7
87.5°	12.7	24.6	29.7	30.5	31.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)