

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: P389787

Luminaire Tested: **24CZ2-50VHE-S-UNV-L940-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: P389787  
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: 24CZ2-50VHE-S-UNV-L940-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4434.7 lumens  
Efficiency: N/A  
Efficacy: 135.6 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

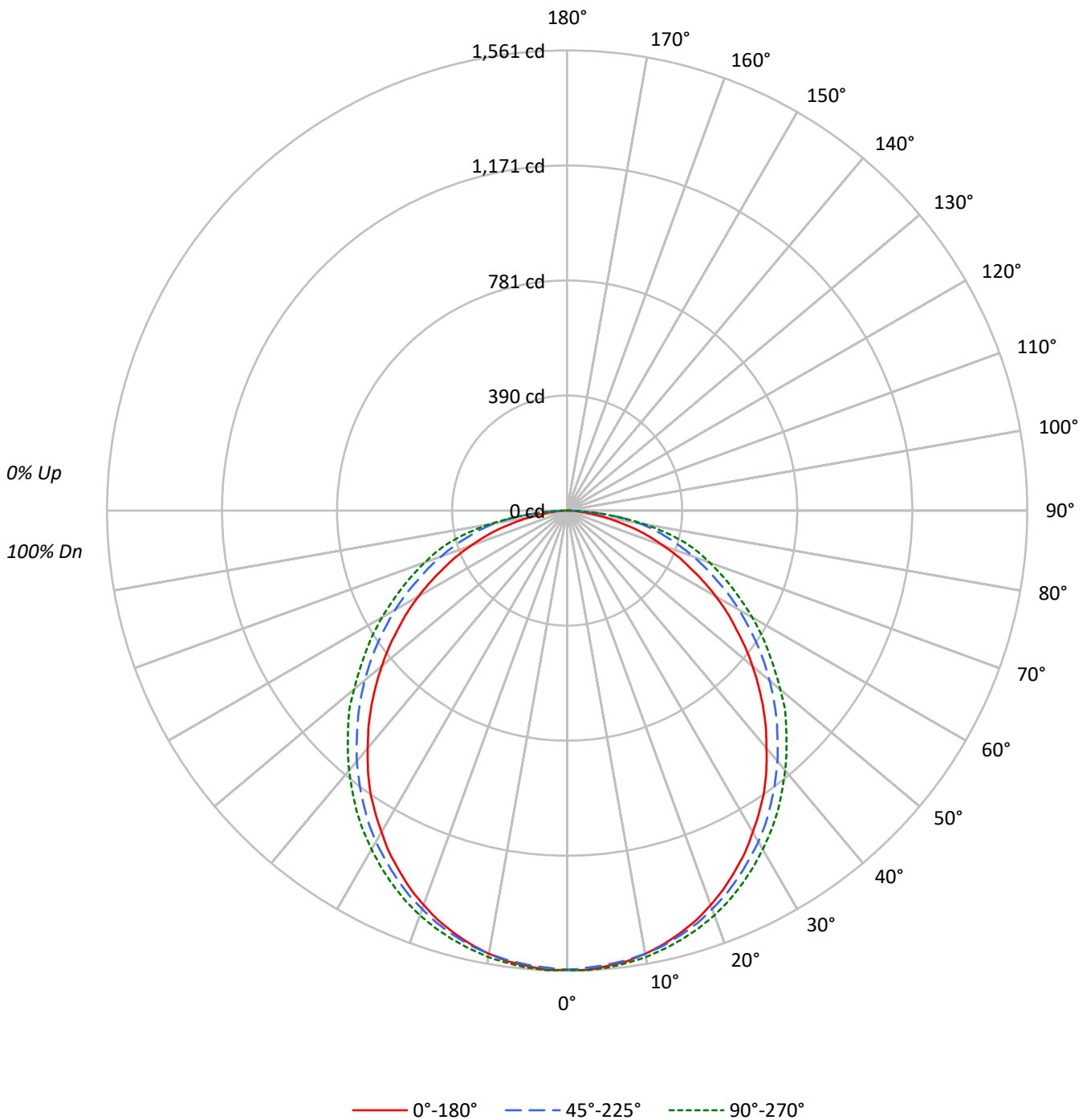
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2096	2096	2096
5°	2095	2089	2102
10°	2086	2086	2102
15°	2066	2076	2098
20°	2039	2059	2091
25°	2001	2039	2079
30°	1956	2016	2062
35°	1913	1983	2045
40°	1848	1950	2021
45°	1788	1911	1999
50°	1719	1875	1976
55°	1642	1841	1956
60°	1566	1812	1952
65°	1466	1780	1964
70°	1358	1790	2017
75°	1215	1823	2131
80°	982	1932	2084
85°	739	1697	1653



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.5	3.3
10°-20°	421.4	9.5
20°-30°	633.5	14.3
30°-40°	754.6	17.0
40°-50°	772.3	17.4
50°-60°	695.3	15.7
60°-70°	546.0	12.3
70°-80°	354.4	8.0
80°-90°	109.6	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°	1202.4	27.1
0°-40°	1957.0	44.1
0°-60°	3424.7	77.2
0°-90°	4434.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4434.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1551	1554	1547	1555	1556	147
15°	1483	1488	1490	1503	1506	418
25°	1348	1359	1373	1396	1400	621
35°	1165	1179	1207	1237	1245	727
45°	940	962	1004	1042	1051	724
55°	700	731	785	826	834	628
65°	461	496	559	606	617	459
75°	234	279	351	399	410	247
85°	48	89	110	107	107	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1557.9	1557.9	1557.9	1557.9	1557.9
2.5°	1559.3	1559.3	1552.3	1559.3	1560.8
5°	1550.9	1553.7	1546.7	1555.1	1556.5
7.5°	1542.4	1542.4	1538.2	1546.7	1548.1
10°	1526.9	1528.4	1526.9	1536.8	1538.2
12.5°	1507.2	1510.0	1511.5	1521.3	1522.7
15°	1483.3	1487.5	1490.3	1503.0	1505.8
17.5°	1456.5	1460.7	1467.8	1481.9	1484.7
20°	1424.1	1429.8	1438.2	1456.5	1460.7
22.5°	1388.9	1394.5	1408.6	1425.5	1432.6
25°	1348.1	1359.3	1373.4	1395.9	1400.2
27.5°	1307.2	1317.1	1335.4	1359.3	1365.0
30°	1259.3	1274.8	1297.3	1321.3	1326.9
32.5°	1212.8	1228.3	1255.1	1280.4	1287.5
35°	1164.9	1179.0	1207.2	1236.8	1245.2
37.5°	1110.0	1128.3	1159.3	1188.9	1197.3
40°	1052.2	1074.8	1110.0	1141.0	1150.8
42.5°	997.3	1021.3	1056.5	1090.3	1101.5
45°	939.6	962.1	1004.3	1042.4	1050.8
47.5°	880.4	905.7	950.8	988.9	1002.9
50°	821.2	848.0	895.9	935.3	943.8
52.5°	762.1	790.2	840.9	883.2	887.4
55°	700.1	731.1	784.6	825.5	833.9
57.5°	643.7	670.5	728.3	770.5	780.4
60°	581.8	611.3	673.3	712.8	725.4
62.5°	522.6	553.6	618.4	657.8	669.1
65°	460.6	495.8	559.2	605.7	617.0
67.5°	407.1	440.9	508.5	553.6	564.9
70°	345.1	383.1	455.0	501.5	512.7
72.5°	291.6	331.0	402.9	447.9	464.8
75°	233.8	278.9	350.7	398.6	409.9
77.5°	177.5	229.6	302.9	339.5	339.5
80°	126.8	181.7	249.3	266.2	269.0
82.5°	83.1	136.6	184.5	183.1	183.1
85°	47.9	88.7	109.9	107.1	107.1
87.5°	18.3	36.6	39.4	39.4	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)