

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: P389170

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L950-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: P389170
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-SQR-UNV-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7395.8 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

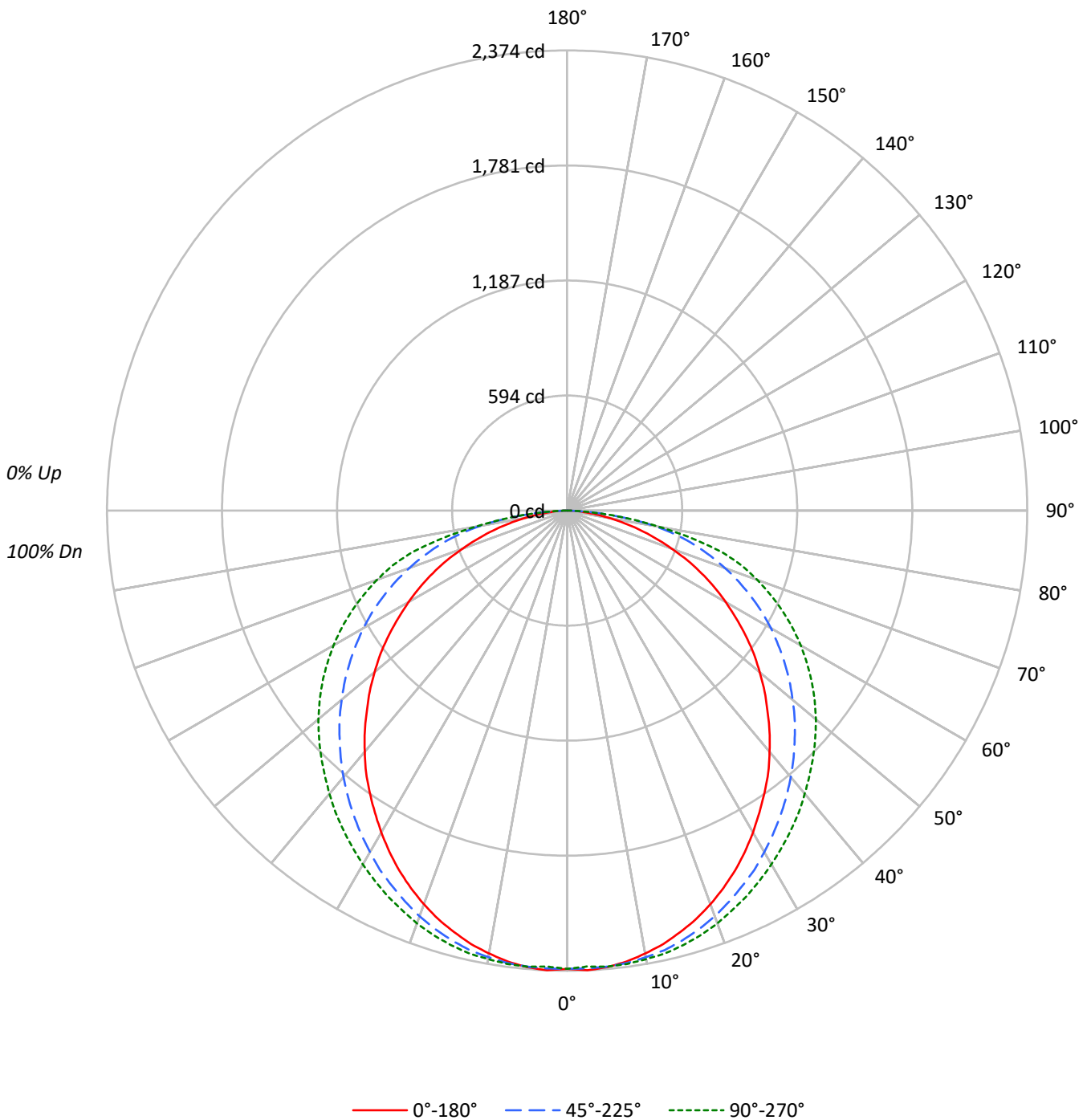
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3181	3181	3181
5°	3193	3190	3190
10°	3170	3196	3210
15°	3137	3198	3232
20°	3095	3189	3245
25°	3042	3172	3256
30°	2978	3161	3274
35°	2916	3153	3305
40°	2853	3153	3350
45°	2779	3160	3416
50°	2714	3180	3507
55°	2635	3214	3615
60°	2543	3266	3746
65°	2434	3328	3903
70°	2258	3411	4102
75°	2044	3529	4291
80°	1722	3539	3690
85°	1320	2677	2677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.4	3.0
10°-20°	645.6	8.7
20°-30°	980.7	13.3
30°-40°	1192.8	16.1
40°-50°	1270.0	17.2
50°-60°	1209.6	16.4
60°-70°	1011.6	13.7
70°-80°	674.4	9.1
80°-90°	186.6	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°	1850.7	25.0
0°-40°	3043.6	41.2
0°-60°	5523.2	74.7
0°-90°	7395.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7395.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2364	2364	2364	2364	2364	
5°	2364	2349	2362	2362	2362	224
15°	2252	2257	2296	2313	2320	635
25°	2049	2076	2137	2174	2193	943
35°	1776	1827	1920	1983	2012	1111
45°	1460	1539	1661	1754	1795	1129
55°	1123	1221	1370	1490	1541	1004
65°	764	877	1045	1175	1226	755
75°	393	518	679	794	826	417
85°	86	159	173	171	173	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2364.1	2364.1	2364.1	2364.1	2364.1
2.5°	2373.8	2356.7	2364.1	2364.1	2354.3
5°	2364.1	2349.4	2361.6	2361.6	2361.6
7.5°	2347.0	2334.8	2354.3	2359.2	2359.2
10°	2320.1	2315.2	2339.6	2347.0	2349.4
12.5°	2290.8	2288.3	2322.5	2332.3	2339.6
15°	2251.7	2256.6	2295.7	2312.8	2320.1
17.5°	2210.2	2220.0	2263.9	2288.3	2295.7
20°	2161.4	2176.0	2227.3	2251.7	2266.4
22.5°	2107.6	2129.6	2183.3	2212.6	2229.7
25°	2049.0	2075.9	2136.9	2173.6	2193.1
27.5°	1985.5	2019.7	2090.5	2132.0	2151.6
30°	1917.1	1956.2	2034.4	2083.2	2107.6
32.5°	1846.3	1892.7	1978.2	2031.9	2061.2
35°	1775.5	1826.8	1919.6	1983.1	2012.4
37.5°	1704.7	1755.9	1858.5	1926.9	1963.5
40°	1624.1	1685.1	1795.0	1870.7	1907.4
42.5°	1545.9	1611.9	1729.1	1812.1	1851.2
45°	1460.4	1538.6	1660.7	1753.5	1795.0
47.5°	1382.3	1460.4	1592.3	1690.0	1736.4
50°	1296.8	1379.8	1519.1	1626.5	1675.4
52.5°	1213.8	1299.3	1445.8	1560.6	1609.4
55°	1123.4	1221.1	1370.1	1489.7	1541.0
57.5°	1033.1	1138.1	1291.9	1416.5	1467.8
60°	945.1	1052.6	1213.8	1338.3	1392.1
62.5°	857.2	964.7	1133.2	1260.2	1311.5
65°	764.4	876.8	1045.3	1174.7	1226.0
67.5°	671.6	788.8	957.3	1086.8	1135.6
70°	573.9	698.5	867.0	994.0	1042.8
72.5°	483.6	608.1	774.2	898.7	945.1
75°	393.2	517.7	678.9	793.7	825.5
77.5°	305.3	429.8	573.9	649.6	657.0
80°	222.2	339.5	456.7	478.7	476.2
82.5°	149.0	254.0	315.0	317.5	324.8
85°	85.5	158.7	173.4	171.0	173.4
87.5°	34.2	56.2	48.8	36.6	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)