

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: P389096

Luminaire Tested: **24CZ2-75HE-SQR-UNV-L940-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: P389096
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: 24CZ2-75HE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6211.9 lumens
Efficiency: N/A
Efficacy: 112.1 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

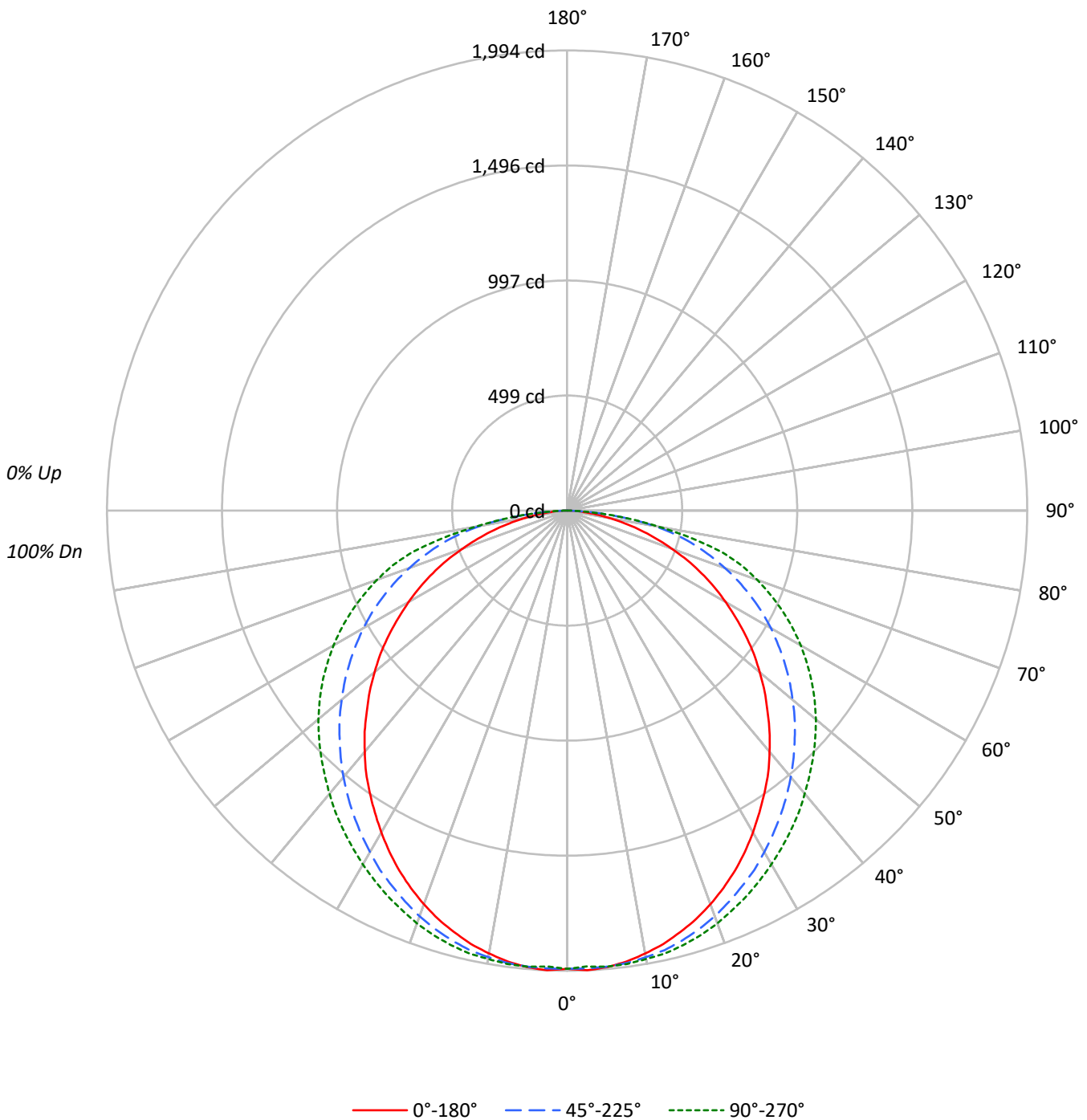
Input Watts (W): 55.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2672	2672	2672
5°	2682	2679	2679
10°	2662	2685	2696
15°	2634	2686	2714
20°	2599	2679	2726
25°	2555	2665	2735
30°	2502	2655	2750
35°	2450	2648	2776
40°	2396	2648	2814
45°	2334	2654	2869
50°	2280	2671	2946
55°	2213	2700	3036
60°	2136	2743	3146
65°	2044	2795	3278
70°	1896	2865	3446
75°	1717	2965	3604
80°	1447	2972	3099
85°	1108	2248	2248



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.5	3.0
10°-20°	542.3	8.7
20°-30°	823.7	13.3
30°-40°	1001.9	16.1
40°-50°	1066.7	17.2
50°-60°	1016.0	16.4
60°-70°	849.7	13.7
70°-80°	566.5	9.1
80°-90°	156.7	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°	1554.5	25.0
0°-40°	2556.4	41.2
0°-60°	4639.0	74.7
0°-90°	6211.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6211.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1986	1986	1986	1986	1986	
5°	1986	1973	1984	1984	1984	188
15°	1891	1895	1928	1942	1949	533
25°	1721	1744	1795	1826	1842	792
35°	1491	1534	1612	1666	1690	933
45°	1227	1292	1395	1473	1508	948
55°	944	1026	1151	1251	1294	844
65°	642	736	878	987	1030	634
75°	330	435	570	667	693	350
85°	72	133	146	144	146	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1985.6	1985.6	1985.6	1985.6	1985.6
2.5°	1993.8	1979.5	1985.6	1985.6	1977.4
5°	1985.6	1973.3	1983.6	1983.6	1983.6
7.5°	1971.3	1961.0	1977.4	1981.5	1981.5
10°	1948.7	1944.6	1965.1	1971.3	1973.3
12.5°	1924.1	1922.0	1950.8	1959.0	1965.1
15°	1891.3	1895.4	1928.2	1942.5	1948.7
17.5°	1856.4	1864.6	1901.5	1922.0	1928.2
20°	1815.4	1827.7	1870.8	1891.3	1903.6
22.5°	1770.2	1788.7	1833.8	1858.4	1872.8
25°	1721.0	1743.6	1794.9	1825.6	1842.0
27.5°	1667.7	1696.4	1755.9	1790.8	1807.2
30°	1610.2	1643.1	1708.7	1749.7	1770.2
32.5°	1550.8	1589.7	1661.5	1706.7	1731.3
35°	1491.3	1534.3	1612.3	1665.6	1690.2
37.5°	1431.8	1474.9	1561.0	1618.4	1649.2
40°	1364.1	1415.4	1507.7	1571.3	1602.0
42.5°	1298.5	1353.8	1452.3	1522.0	1554.9
45°	1226.7	1292.3	1394.9	1472.8	1507.7
47.5°	1161.0	1226.7	1337.4	1419.5	1458.5
50°	1089.2	1159.0	1275.9	1366.1	1407.2
52.5°	1019.5	1091.3	1214.3	1310.8	1351.8
55°	943.6	1025.6	1150.8	1251.3	1294.3
57.5°	867.7	955.9	1085.1	1189.7	1232.8
60°	793.8	884.1	1019.5	1124.1	1169.2
62.5°	720.0	810.3	951.8	1058.5	1101.5
65°	642.0	736.4	877.9	986.7	1029.7
67.5°	564.1	662.6	804.1	912.8	953.8
70°	482.0	586.7	728.2	834.9	875.9
72.5°	406.2	510.8	650.3	754.9	793.8
75°	330.3	434.9	570.3	666.7	693.3
77.5°	256.4	361.0	482.0	545.6	551.8
80°	186.7	285.1	383.6	402.0	400.0
82.5°	125.1	213.3	264.6	266.7	272.8
85°	71.8	133.3	145.6	143.6	145.6
87.5°	28.7	47.2	41.0	30.8	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)