

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: P388997

Luminaire Tested: **24CZ2-80VHE-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: P388997
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: 24CZ2-80VHE-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

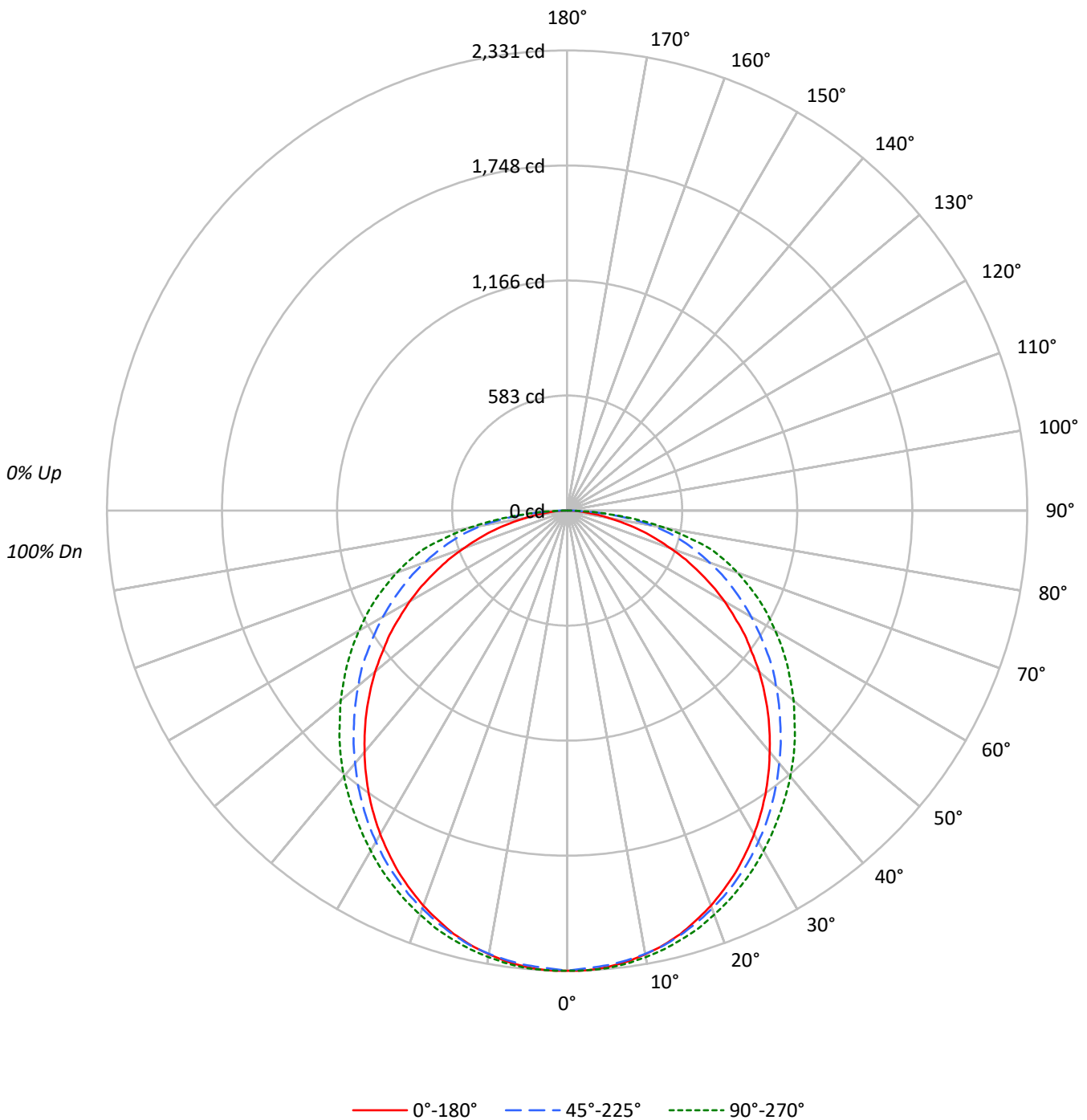
Lumens per Lamp: N/A
Luminaire Lumens: 6943.2 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 53.8
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°	3137	3137	3137
5°	3136	3123	3142
10°	3118	3115	3137
15°	3092	3099	3131
20°	3049	3072	3119
25°	3000	3045	3106
30°	2941	3010	3093
35°	2877	2973	3083
40°	2804	2934	3089
45°	2734	2906	3104
50°	2658	2891	3133
55°	2577	2886	3191
60°	2475	2900	3274
65°	2346	2944	3416
70°	2179	3017	3610
75°	1987	3168	3915
80°	1634	3412	3914
85°	1252	3148	3362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	3.2
10°-20°	629.4	9.1
20°-30°	947.2	13.6
30°-40°	1135.1	16.3
40°-50°	1182.9	17.0
50°-60°	1100.6	15.9
60°-70°	906.4	13.1
70°-80°	617.3	8.9
80°-90°	203.8	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°	1797.1	25.9
0°-40°	2932.2	42.2
0°-60°	5215.6	75.1
0°-90°	6943.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6943.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2331	2331	2331	2331	2331	
5°	2322	2322	2313	2324	2326	220
15°	2220	2222	2225	2245	2248	625
25°	2021	2030	2051	2086	2092	930
35°	1752	1773	1810	1858	1877	1095
45°	1437	1467	1527	1604	1631	1108
55°	1098	1136	1230	1328	1360	979
65°	737	800	925	1034	1073	731
75°	382	468	609	718	753	403
85°	81	158	204	218	218	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2331.2	2331.2	2331.2	2331.2	2331.2
2.5°	2331.2	2331.2	2319.6	2331.2	2331.2
5°	2321.9	2321.9	2312.6	2324.2	2326.5
7.5°	2305.7	2308.0	2298.7	2312.6	2314.9
10°	2282.5	2284.8	2280.2	2294.1	2296.4
12.5°	2254.7	2257.0	2257.0	2273.2	2275.5
15°	2219.9	2222.2	2224.6	2245.4	2247.7
17.5°	2175.9	2182.9	2187.5	2213.0	2217.6
20°	2129.6	2136.5	2145.8	2173.6	2178.2
22.5°	2076.3	2085.5	2101.7	2131.9	2138.8
25°	2020.6	2029.9	2050.8	2085.5	2092.5
27.5°	1958.1	1972.0	1997.5	2034.5	2043.8
30°	1893.2	1907.1	1937.2	1976.6	1990.5
32.5°	1823.7	1842.2	1877.0	1921.0	1934.9
35°	1751.8	1772.7	1809.8	1858.4	1877.0
37.5°	1675.4	1698.5	1742.6	1795.9	1819.0
40°	1596.6	1624.4	1670.7	1733.3	1758.8
42.5°	1517.8	1543.3	1601.2	1668.4	1696.2
45°	1436.7	1466.8	1527.1	1603.5	1631.3
47.5°	1353.3	1383.4	1455.2	1536.3	1561.8
50°	1269.9	1300.0	1381.1	1466.8	1496.9
52.5°	1179.5	1218.9	1311.6	1397.3	1427.4
55°	1098.4	1135.5	1230.5	1327.8	1360.2
57.5°	1005.7	1049.7	1154.0	1256.0	1290.7
60°	919.9	966.3	1077.5	1181.8	1216.6
62.5°	831.9	882.9	1001.1	1107.6	1147.0
65°	736.9	799.5	924.6	1033.5	1072.9
67.5°	651.1	716.0	848.1	959.3	994.1
70°	553.8	632.6	767.0	878.2	917.6
72.5°	470.4	549.2	690.5	799.5	838.8
75°	382.3	468.1	609.4	718.3	753.1
77.5°	294.3	389.3	530.7	614.1	625.7
80°	210.9	310.5	440.3	488.9	505.2
82.5°	148.3	238.7	324.4	356.9	366.1
85°	81.1	157.6	203.9	217.8	217.8
87.5°	34.8	67.2	81.1	83.4	85.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)