

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: P389909

Luminaire Tested: **24CZ2-75VHE-S-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: P389909  
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: 24CZ2-75VHE-S-UNV-L940-CD1-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: 6877.2 lumens  
Efficiency: N/A  
Efficacy: 137.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

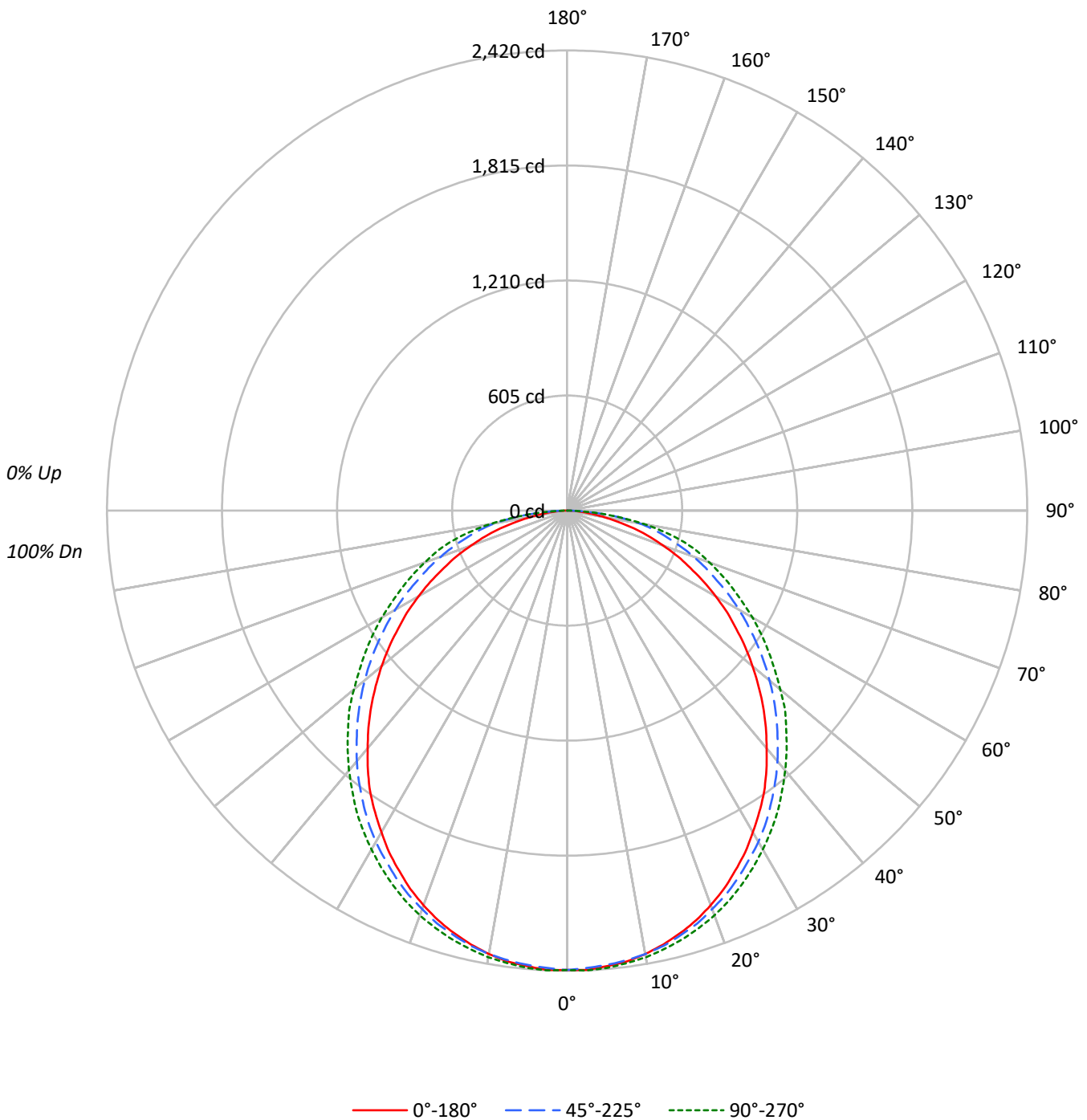
Input Watts (W): 49.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3251	3251	3251
5°	3248	3239	3260
10°	3235	3235	3259
15°	3204	3219	3253
20°	3162	3193	3244
25°	3104	3162	3223
30°	3034	3126	3197
35°	2967	3075	3172
40°	2866	3023	3135
45°	2772	2964	3101
50°	2666	2908	3064
55°	2547	2854	3034
60°	2428	2810	3027
65°	2274	2761	3046
70°	2105	2776	3128
75°	1885	2828	3305
80°	1523	2996	3233
85°	1147	2631	2563



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.7	3.3
10°-20°	653.5	9.5
20°-30°	982.4	14.3
30°-40°	1170.2	17.0
40°-50°	1197.7	17.4
50°-60°	1078.3	15.7
60°-70°	846.8	12.3
70°-80°	549.6	8.0
80°-90°	170.0	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°	1864.7	27.1
0°-40°	3034.9	44.1
0°-60°	5310.9	77.2
0°-90°	6877.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6877.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2416	2416	2416	2416	2416	
5°	2405	2410	2398	2412	2414	229
15°	2300	2307	2311	2331	2335	649
25°	2090	2108	2130	2165	2171	963
35°	1806	1828	1872	1918	1931	1127
45°	1457	1492	1558	1616	1630	1123
55°	1086	1134	1217	1280	1293	973
65°	714	769	867	939	957	711
75°	363	432	544	618	636	384
85°	74	138	170	166	166	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2416.0	2416.0	2416.0	2416.0	2416.0
2.5°	2418.2	2418.2	2407.3	2418.2	2420.4
5°	2405.1	2409.5	2398.5	2411.6	2413.8
7.5°	2392.0	2392.0	2385.4	2398.5	2400.7
10°	2367.9	2370.1	2367.9	2383.2	2385.4
12.5°	2337.4	2341.7	2343.9	2359.2	2361.4
15°	2300.2	2306.8	2311.2	2330.8	2335.2
17.5°	2258.7	2265.3	2276.2	2298.0	2302.4
20°	2208.5	2217.2	2230.3	2258.7	2265.3
22.5°	2153.9	2162.6	2184.5	2210.7	2221.6
25°	2090.5	2108.0	2129.8	2164.8	2171.3
27.5°	2027.2	2042.5	2070.9	2108.0	2116.7
30°	1952.9	1976.9	2011.9	2049.0	2057.8
32.5°	1880.8	1904.8	1946.3	1985.7	1996.6
35°	1806.5	1828.4	1872.1	1917.9	1931.1
37.5°	1721.3	1749.7	1797.8	1843.7	1856.8
40°	1631.8	1666.7	1721.3	1769.4	1784.7
42.5°	1546.6	1583.7	1638.3	1690.8	1708.2
45°	1457.0	1492.0	1557.5	1616.5	1629.6
47.5°	1365.3	1404.6	1474.5	1533.5	1555.3
50°	1273.5	1315.0	1389.3	1450.5	1463.6
52.5°	1181.8	1225.5	1304.1	1369.7	1376.2
55°	1085.7	1133.7	1216.7	1280.1	1293.2
57.5°	998.3	1039.8	1129.4	1194.9	1210.2
60°	902.2	948.1	1044.2	1105.3	1125.0
62.5°	810.4	858.5	959.0	1020.1	1037.6
65°	714.3	768.9	867.2	939.3	956.8
67.5°	631.3	683.7	788.6	858.5	876.0
70°	535.2	594.2	705.6	777.7	795.1
72.5°	452.2	513.3	624.8	694.7	720.9
75°	362.6	432.5	543.9	618.2	635.7
77.5°	275.2	356.1	469.7	526.5	526.5
80°	196.6	281.8	386.6	412.9	417.2
82.5°	128.9	211.9	286.2	284.0	284.0
85°	74.3	137.6	170.4	166.0	166.0
87.5°	28.4	56.8	61.2	61.2	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)