

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: P260690

Luminaire Tested: **24CZ-LD5-40SE-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-40SE-UNV-L93050-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3780.8 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

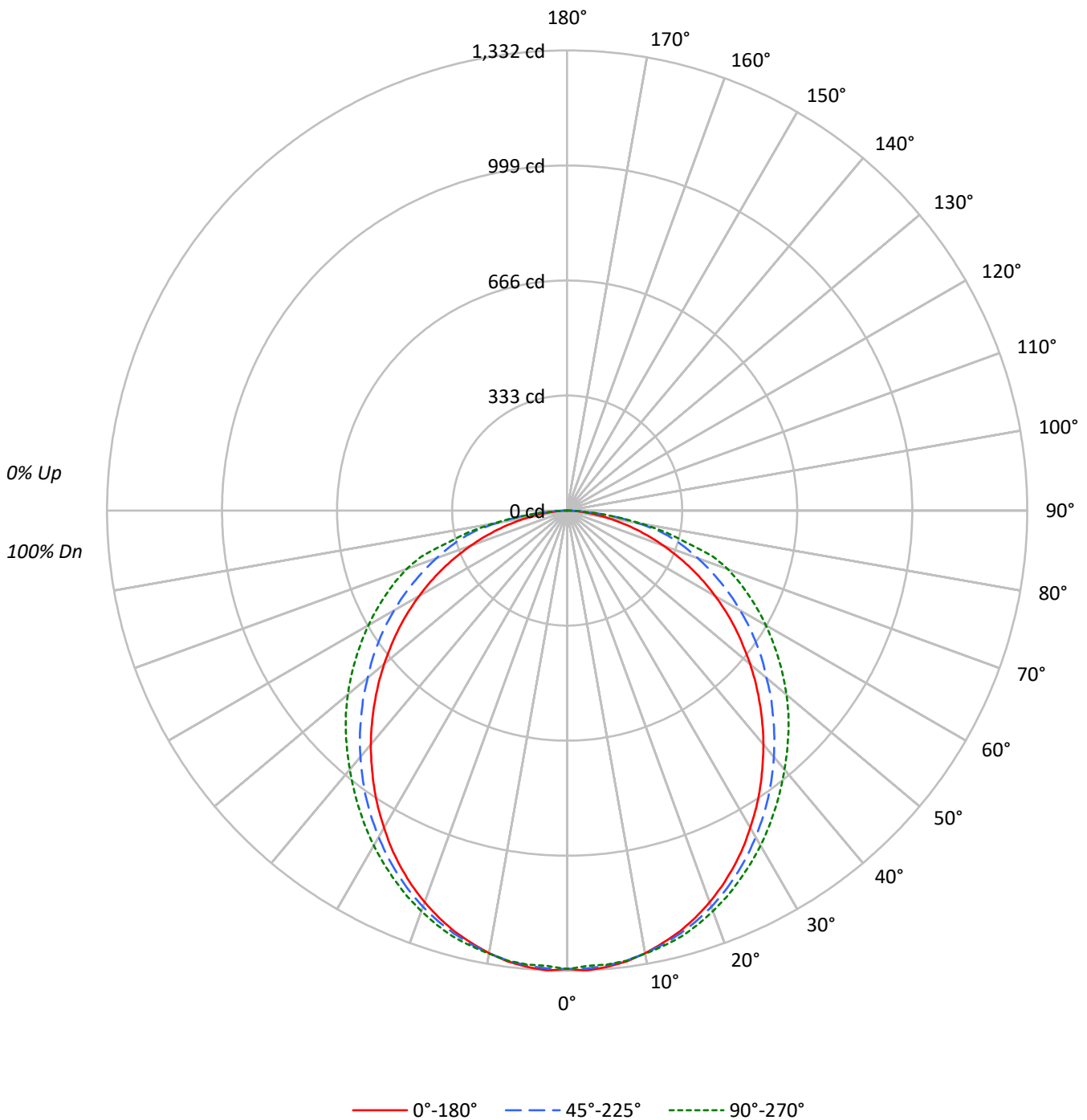
Input Watts (W): 31.688262  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32					32			
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1785	1785	1785
5°	1790	1785	1782
10°	1777	1777	1779
15°	1756	1765	1778
20°	1728	1748	1766
25°	1691	1724	1753
30°	1647	1695	1740
35°	1601	1667	1726
40°	1553	1635	1719
45°	1500	1603	1724
50°	1447	1577	1734
55°	1394	1567	1752
60°	1331	1557	1787
65°	1261	1558	1846
70°	1166	1584	1945
75°	1043	1656	1851
80°	872	1585	1695
85°	659	1220	1159



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.4	3.3
10°-20°	356.9	9.4
20°-30°	533.5	14.1
30°-40°	632.9	16.7
40°-50°	651.4	17.2
50°-60°	597.6	15.8
60°-70°	483.2	12.8
70°-80°	313.6	8.3
80°-90°	86.5	2.3
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°	1015.7	26.9
0°-40°	1648.6	43.6
0°-60°	2897.6	76.6
0°-90°	3780.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3780.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1327	1327	1327	1327	1327	
5°	1326	1316	1322	1320	1319	126
15°	1261	1256	1267	1272	1276	355
25°	1139	1140	1161	1172	1181	524
35°	975	982	1015	1037	1051	610
45°	788	801	843	883	906	608
55°	594	612	668	722	747	531
65°	396	419	489	554	580	391
75°	201	238	318	356	356	213
85°	43	72	79	76	75	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1326.9	1326.9	1326.9	1326.9	1326.9
2.5°	1332.1	1321.7	1326.9	1325.6	1319.1
5°	1325.6	1316.5	1321.7	1320.4	1319.1
7.5°	1316.5	1307.5	1313.9	1312.6	1313.9
10°	1301.0	1293.2	1301.0	1302.3	1302.3
12.5°	1281.6	1275.1	1285.5	1288.0	1290.6
15°	1260.9	1255.7	1267.3	1272.5	1276.4
17.5°	1235.0	1231.1	1245.3	1251.8	1257.0
20°	1206.5	1205.2	1220.7	1227.2	1233.7
22.5°	1174.1	1174.1	1192.2	1200.0	1209.1
25°	1139.2	1140.5	1161.2	1171.5	1180.6
27.5°	1101.6	1102.9	1127.5	1140.5	1150.8
30°	1060.2	1065.4	1091.3	1108.1	1119.8
32.5°	1018.8	1025.3	1053.7	1073.2	1086.1
35°	974.8	982.5	1014.9	1036.9	1051.1
37.5°	929.5	938.5	973.5	998.1	1014.9
40°	884.2	894.5	930.8	959.2	978.7
42.5°	836.3	847.9	888.0	921.7	942.4
45°	788.4	801.3	842.7	882.9	906.2
47.5°	740.5	756.0	800.0	844.0	868.6
50°	691.3	706.8	753.4	803.9	828.5
52.5°	642.1	660.2	712.0	763.8	788.4
55°	594.2	612.3	668.0	722.3	746.9
57.5°	545.0	563.1	624.0	680.9	705.5
60°	494.5	515.2	578.6	636.9	664.1
62.5°	445.3	467.3	534.6	596.8	622.7
65°	396.1	419.4	489.3	554.1	579.9
67.5°	345.6	372.8	445.3	511.3	538.5
70°	296.4	326.2	402.6	468.6	494.5
72.5°	248.5	280.9	359.9	427.2	442.7
75°	200.6	238.2	318.5	356.0	356.0
77.5°	155.3	196.8	271.8	286.1	293.9
80°	112.6	157.9	204.5	221.4	218.8
82.5°	75.1	120.4	146.3	146.3	142.4
85°	42.7	72.5	79.0	76.4	75.1
87.5°	18.1	27.2	24.6	19.4	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)