

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: P260689

Luminaire Tested: **24CZ-LD5-40SE-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260689  
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-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3716.1 lumens  
Efficiency: N/A  
Efficacy: 119.1 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

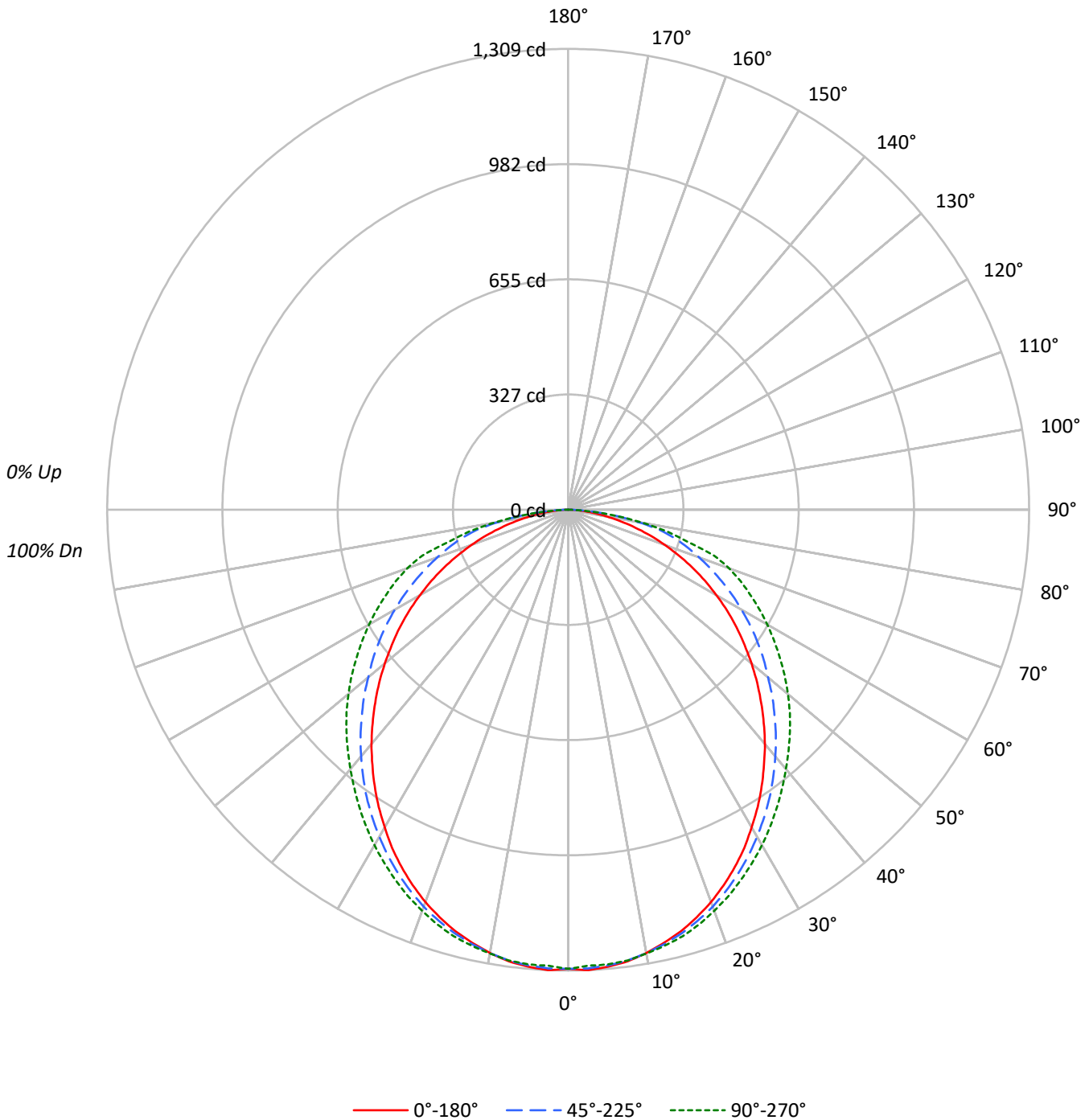
Input Watts (W): 31.201686  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P260689

CATALOG NUMBER: 24CZ-LD5-40SE-UNV-L93050-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P260689

CATALOG NUMBER: 24CZ-LD5-40SE-UNV-L93050-W2A1-U-4000K

**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°	1755	1755	1755
5°	1760	1755	1751
10°	1747	1747	1749
15°	1726	1735	1747
20°	1698	1718	1736
25°	1662	1694	1723
30°	1619	1666	1710
35°	1574	1638	1697
40°	1526	1607	1689
45°	1474	1576	1695
50°	1422	1550	1705
55°	1370	1540	1722
60°	1308	1530	1756
65°	1239	1531	1815
70°	1146	1557	1912
75°	1025	1627	1819
80°	858	1557	1666
85°	648	1198	1139



TEST NUMBER: P260689

CATALOG NUMBER: 24CZ-LD5-40SE-UNV-L93050-W2A1-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.2	3.3
10°-20°	350.7	9.4
20°-30°	524.4	14.1
30°-40°	622.0	16.7
40°-50°	640.2	17.2
50°-60°	587.3	15.8
60°-70°	474.9	12.8
70°-80°	308.2	8.3
80°-90°	85.0	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°	998.3	26.9
0°-40°	1620.4	43.6
0°-60°	2848.0	76.6
0°-90°	3716.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3716.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1303	1294	1299	1298	1296	124
15°	1239	1234	1246	1251	1254	349
25°	1120	1121	1141	1152	1160	515
35°	958	966	998	1019	1033	599
45°	775	788	828	868	891	598
55°	584	602	656	710	734	522
65°	389	412	481	545	570	385
75°	197	234	313	350	350	210
85°	42	71	78	75	74	51
90°	0	0	0	0	0	



TEST NUMBER: P260689

CATALOG NUMBER: 24CZ-LD5-40SE-UNV-L93050-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1304.1	1304.1	1304.1	1304.1	1304.1
2.5°	1309.2	1299.1	1304.1	1302.9	1296.5
5°	1302.9	1294.0	1299.1	1297.8	1296.5
7.5°	1294.0	1285.1	1291.4	1290.1	1291.4
10°	1278.7	1271.1	1278.7	1280.0	1280.0
12.5°	1259.6	1253.3	1263.4	1266.0	1268.5
15°	1239.3	1234.2	1245.6	1250.7	1254.5
17.5°	1213.8	1210.0	1224.0	1230.3	1235.4
20°	1185.8	1184.5	1199.8	1206.2	1212.5
22.5°	1154.0	1154.0	1171.8	1179.5	1188.4
25°	1119.7	1120.9	1141.3	1151.5	1160.4
27.5°	1082.8	1084.0	1108.2	1120.9	1131.1
30°	1042.0	1047.1	1072.6	1089.1	1100.6
32.5°	1001.3	1007.7	1035.7	1054.8	1067.5
35°	958.1	965.7	997.5	1019.1	1033.1
37.5°	913.5	922.4	956.8	981.0	997.5
40°	869.0	879.2	914.8	942.8	961.9
42.5°	821.9	833.4	872.8	905.9	926.3
45°	774.9	787.6	828.3	867.7	890.6
47.5°	727.8	743.0	786.3	829.6	853.7
50°	679.4	694.7	740.5	790.1	814.3
52.5°	631.1	648.9	699.8	750.7	774.9
55°	584.0	601.8	656.5	710.0	734.1
57.5°	535.7	553.5	613.3	669.2	693.4
60°	486.0	506.4	568.7	626.0	652.7
62.5°	437.7	459.3	525.5	586.5	612.0
65°	389.3	412.2	480.9	544.6	570.0
67.5°	339.7	366.4	437.7	502.6	529.3
70°	291.4	320.6	395.7	460.6	486.0
72.5°	244.3	276.1	353.7	419.9	435.1
75°	197.2	234.1	313.0	349.9	349.9
77.5°	152.7	193.4	267.2	281.2	288.8
80°	110.7	155.2	201.0	217.6	215.0
82.5°	73.8	118.3	143.8	143.8	140.0
85°	42.0	71.3	77.6	75.1	73.8
87.5°	17.8	26.7	24.2	19.1	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)