

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: P230454

Luminaire Tested: **24CZ-LD5-60SE-SQP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230454  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-60SE-SQP-UNV-L940-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SQP LENS  
Light Source: (84) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3632.9 lumens  
Efficiency: N/A  
Efficacy: 60.5 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

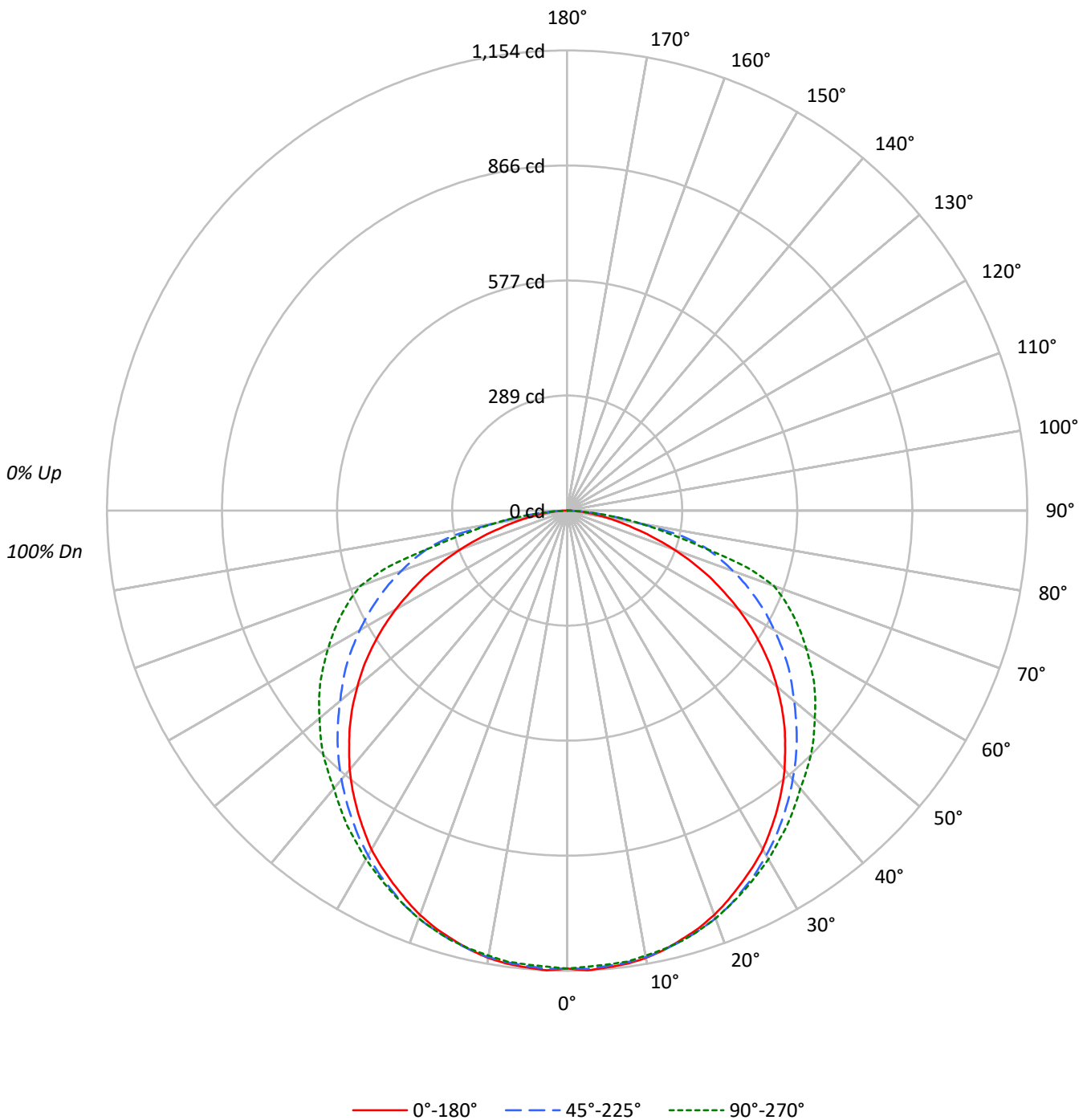
Input Watts (W): 60  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	97	93	96	93	90	92	90	87	89	87	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	60	70	64	59	67	63	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	51	45	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	29	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	35	28	24	22

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

	0°	45°	90°
0°	1545	1545	1545
5°	1554	1549	1543
10°	1556	1554	1549
15°	1550	1555	1555
20°	1545	1558	1558
25°	1532	1555	1560
30°	1525	1551	1569
35°	1507	1547	1581
40°	1490	1546	1599
45°	1468	1550	1646
50°	1438	1555	1697
55°	1400	1585	1774
60°	1338	1616	1863
65°	1255	1667	1996
70°	1122	1742	2170
75°	927	1863	1795
80°	756	1440	1454
85°	608	956	898



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.1	3.0
10°-20°	314.7	8.7
20°-30°	481.0	13.2
30°-40°	588.3	16.2
40°-50°	629.5	17.3
50°-60°	602.8	16.6
60°-70°	509.9	14.0
70°-80°	323.2	8.9
80°-90°	74.4	2.0
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°	904.8	24.9
0°-40°	1493.1	41.1
0°-60°	2725.4	75.0
0°-90°	3632.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3632.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1150	1145	1147	1145	1143	109
15°	1113	1111	1116	1116	1116	314
25°	1032	1032	1047	1051	1051	476
35°	918	923	942	955	963	574
45°	771	784	814	848	865	594
55°	597	616	676	732	756	532
65°	394	432	524	595	627	388
75°	178	252	358	356	345	194
85°	39	60	62	56	58	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1148.4	1148.4	1148.4	1148.4	1148.4
2.5°	1154.1	1148.4	1150.3	1148.4	1144.7
5°	1150.3	1144.7	1146.6	1144.7	1142.8
7.5°	1146.6	1140.9	1142.8	1140.9	1140.9
10°	1139.1	1133.4	1137.2	1135.3	1133.4
12.5°	1127.8	1124.0	1127.8	1125.9	1125.9
15°	1112.8	1110.9	1116.5	1116.5	1116.5
17.5°	1097.8	1095.9	1103.4	1103.4	1103.4
20°	1079.0	1077.1	1088.4	1088.4	1088.4
22.5°	1056.5	1054.6	1069.6	1069.6	1069.6
25°	1032.1	1032.1	1047.1	1050.9	1050.9
27.5°	1007.7	1007.7	1024.6	1030.2	1030.2
30°	981.4	981.4	998.3	1005.8	1009.6
32.5°	949.5	953.3	972.0	981.4	985.2
35°	917.6	923.3	942.0	955.2	962.7
37.5°	883.8	889.5	912.0	927.0	936.4
40°	848.2	855.7	880.1	898.9	910.1
42.5°	808.8	820.0	848.2	872.6	887.6
45°	771.3	784.4	814.4	848.2	865.1
47.5°	730.0	745.0	778.8	821.9	838.8
50°	686.8	701.8	743.1	791.9	810.7
52.5°	643.6	660.5	709.3	761.9	784.4
55°	596.7	615.5	675.5	731.8	756.2
57.5°	547.9	570.5	638.0	698.1	724.3
60°	497.3	525.4	600.5	664.3	692.4
62.5°	444.7	478.5	563.0	630.5	660.5
65°	394.1	431.6	523.6	594.9	626.8
67.5°	339.7	386.6	484.1	561.1	591.1
70°	285.2	339.7	442.9	521.7	551.7
72.5°	230.8	296.5	401.6	472.9	472.9
75°	178.3	251.5	358.4	356.5	345.3
77.5°	135.1	210.2	294.6	251.5	253.3
80°	97.6	168.9	185.8	185.8	187.7
82.5°	65.7	129.5	120.1	118.2	122.0
85°	39.4	60.0	61.9	56.3	58.2
87.5°	18.8	20.6	16.9	11.3	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)