

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: P230011

Luminaire Tested: **24CZ-LD5-45SE-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230011  
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-LD5-45SE-UNV-L950-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH RIBBED LENS  
Light Source: (84) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4389.0 lumens  
Efficiency: N/A  
Efficacy: 110.0 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

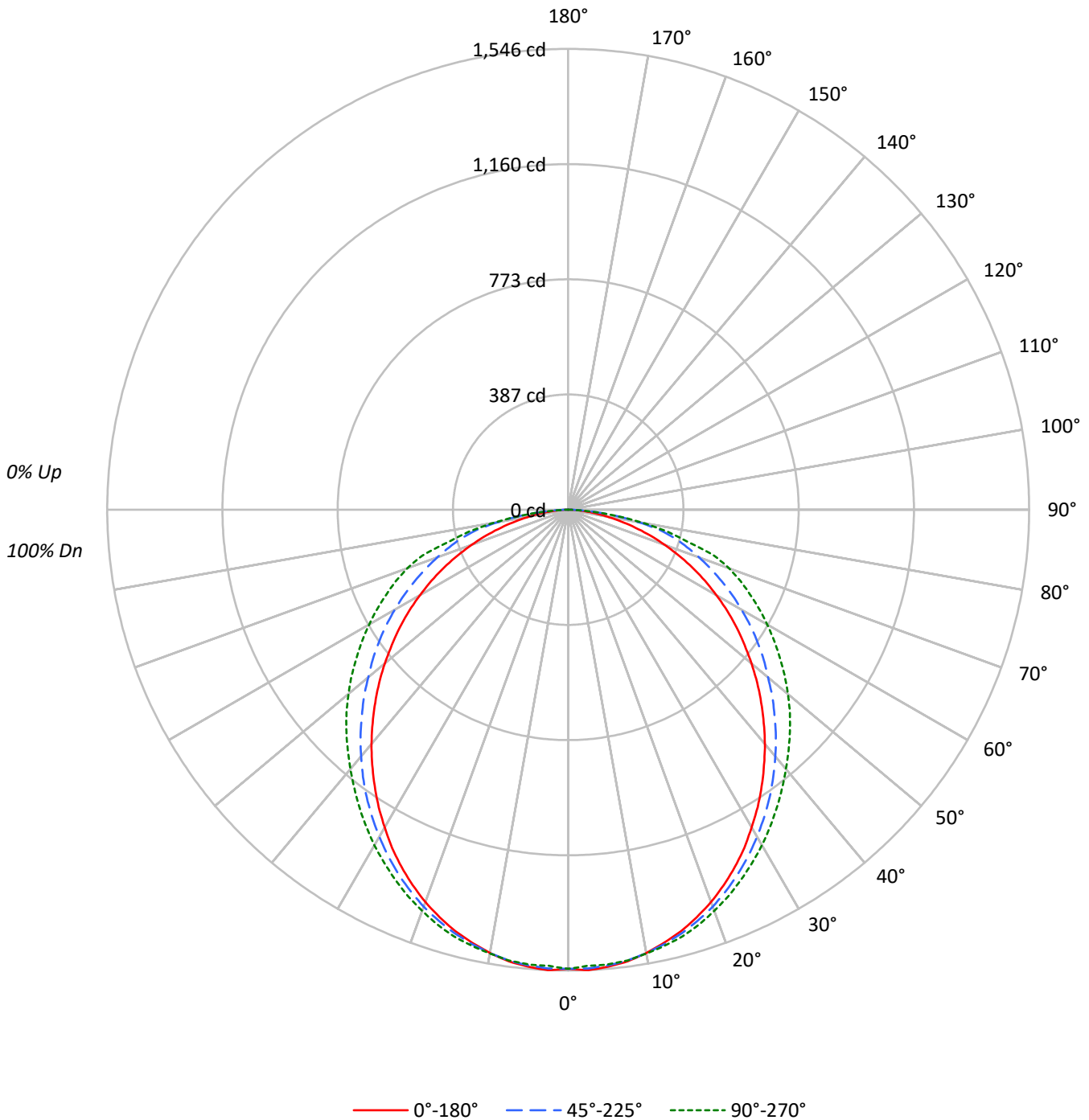
Input Watts (W): 39.91  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	2072	2072	2072
5°	2078	2072	2068
10°	2063	2063	2065
15°	2039	2049	2064
20°	2005	2029	2051
25°	1963	2001	2035
30°	1912	1968	2020
35°	1859	1935	2004
40°	1803	1898	1995
45°	1741	1862	2002
50°	1680	1831	2013
55°	1618	1819	2034
60°	1545	1808	2074
65°	1464	1808	2143
70°	1354	1839	2258
75°	1211	1922	2149
80°	1013	1839	1968
85°	766	1416	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.6	3.3
10°-20°	414.3	9.4
20°-30°	619.3	14.1
30°-40°	734.7	16.7
40°-50°	756.2	17.2
50°-60°	693.7	15.8
60°-70°	560.9	12.8
70°-80°	364.0	8.3
80°-90°	100.4	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°	1179.1	26.9
0°-40°	1913.8	43.6
0°-60°	3363.7	76.6
0°-90°	4389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4389.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1540	1540	1540	1540	1540	
5°	1539	1528	1534	1533	1531	146
15°	1464	1458	1471	1477	1482	412
25°	1322	1324	1348	1360	1370	609
35°	1132	1141	1178	1204	1220	708
45°	915	930	978	1025	1052	706
55°	690	711	775	838	867	616
65°	460	487	568	643	673	454
75°	233	276	370	413	413	248
85°	50	84	92	89	87	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1540.3	1540.3	1540.3	1540.3	1540.3
2.5°	1546.3	1534.3	1540.3	1538.8	1531.3
5°	1538.8	1528.3	1534.3	1532.8	1531.3
7.5°	1528.3	1517.8	1525.3	1523.8	1525.3
10°	1510.3	1501.2	1510.3	1511.8	1511.8
12.5°	1487.7	1480.2	1492.2	1495.2	1498.2
15°	1463.7	1457.7	1471.2	1477.2	1481.7
17.5°	1433.6	1429.1	1445.6	1453.2	1459.2
20°	1400.6	1399.1	1417.1	1424.6	1432.1
22.5°	1363.0	1363.0	1384.0	1393.0	1403.6
25°	1322.4	1323.9	1348.0	1360.0	1370.5
27.5°	1278.8	1280.3	1308.9	1323.9	1335.9
30°	1230.7	1236.8	1266.8	1286.3	1299.9
32.5°	1182.7	1190.2	1223.2	1245.8	1260.8
35°	1131.6	1140.6	1178.1	1203.7	1220.2
37.5°	1079.0	1089.5	1130.1	1158.6	1178.1
40°	1026.4	1038.4	1080.5	1113.5	1136.1
42.5°	970.8	984.3	1030.9	1070.0	1094.0
45°	915.2	930.2	978.3	1024.9	1051.9
47.5°	859.6	877.6	928.7	979.8	1008.3
50°	802.5	820.5	874.6	933.2	961.8
52.5°	745.4	766.4	826.5	886.6	915.2
55°	689.8	710.8	775.4	838.5	867.1
57.5°	632.7	653.7	724.3	790.4	819.0
60°	574.0	598.1	671.7	739.3	770.9
62.5°	516.9	542.5	620.6	692.8	722.8
65°	459.8	486.9	568.0	643.2	673.2
67.5°	401.2	432.8	516.9	593.6	625.1
70°	344.1	378.7	467.4	544.0	574.0
72.5°	288.5	326.1	417.8	495.9	513.9
75°	232.9	276.5	369.7	413.3	413.3
77.5°	180.3	228.4	315.6	332.1	341.1
80°	130.7	183.3	237.4	257.0	254.0
82.5°	87.2	139.8	169.8	169.8	165.3
85°	49.6	84.2	91.7	88.7	87.2
87.5°	21.0	31.6	28.6	22.5	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)