

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: P276163

Luminaire Tested: **24CZ2-45-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276163  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4355.4 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

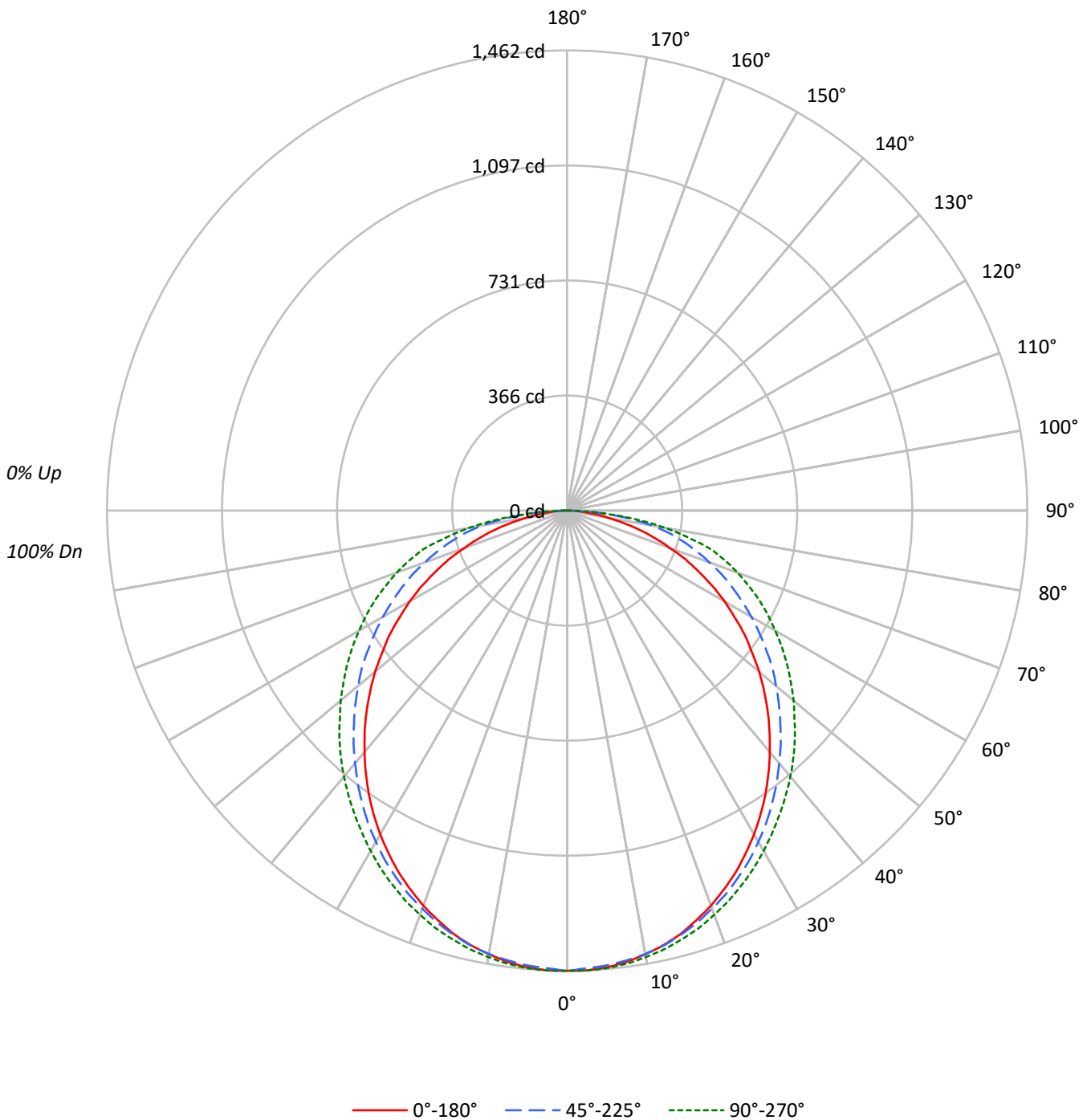
Input Watts (W): 35.619  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	89	86	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	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1968	1968	1968
5°	1967	1959	1971
10°	1956	1954	1968
15°	1940	1944	1964
20°	1913	1927	1956
25°	1882	1910	1949
30°	1845	1888	1940
35°	1805	1865	1934
40°	1759	1841	1938
45°	1715	1823	1947
50°	1667	1813	1966
55°	1616	1811	2002
60°	1553	1819	2053
65°	1472	1847	2143
70°	1367	1893	2264
75°	1247	1987	2456
80°	1025	2140	2455
85°	786	1974	2109



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.3	3.2
10°-20°	394.8	9.1
20°-30°	594.2	13.6
30°-40°	712.0	16.3
40°-50°	742.0	17.0
50°-60°	690.4	15.9
60°-70°	568.6	13.1
70°-80°	387.2	8.9
80°-90°	127.8	2.9
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°	1127.3	25.9
0°-40°	1839.3	42.2
0°-60°	3271.7	75.1
0°-90°	4355.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4355.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1462	1462	1462	1462	1462	
5°	1456	1456	1451	1458	1459	138
15°	1392	1394	1395	1408	1410	392
25°	1268	1273	1286	1308	1313	584
35°	1099	1112	1135	1166	1177	687
45°	901	920	958	1006	1023	695
55°	689	712	772	833	853	614
65°	462	502	580	648	673	459
75°	240	294	382	451	472	253
85°	51	99	128	137	137	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1462.3	1462.3	1462.3	1462.3	1462.3
2.5°	1462.3	1462.3	1455.0	1462.3	1462.3
5°	1456.5	1456.5	1450.7	1457.9	1459.4
7.5°	1446.3	1447.8	1442.0	1450.7	1452.1
10°	1431.8	1433.2	1430.3	1439.0	1440.5
12.5°	1414.3	1415.8	1415.8	1426.0	1427.4
15°	1392.5	1394.0	1395.4	1408.5	1410.0
17.5°	1364.9	1369.3	1372.2	1388.2	1391.1
20°	1335.8	1340.2	1346.0	1363.5	1366.4
22.5°	1302.4	1308.2	1318.4	1337.3	1341.7
25°	1267.5	1273.3	1286.4	1308.2	1312.6
27.5°	1228.3	1237.0	1253.0	1276.2	1282.1
30°	1187.6	1196.3	1215.2	1239.9	1248.6
32.5°	1144.0	1155.6	1177.4	1205.0	1213.7
35°	1098.9	1112.0	1135.2	1165.8	1177.4
37.5°	1050.9	1065.5	1093.1	1126.5	1141.1
40°	1001.5	1019.0	1048.0	1087.3	1103.3
42.5°	952.1	968.1	1004.4	1046.6	1064.0
45°	901.2	920.1	957.9	1005.9	1023.3
47.5°	848.9	867.8	912.9	963.7	979.7
50°	796.6	815.5	866.3	920.1	939.0
52.5°	739.9	764.6	822.7	876.5	895.4
55°	689.0	712.3	771.9	832.9	853.3
57.5°	630.9	658.5	723.9	787.8	809.6
60°	577.1	606.1	675.9	741.3	763.1
62.5°	521.8	553.8	627.9	694.8	719.5
65°	462.2	501.5	580.0	648.3	673.0
67.5°	408.5	449.2	532.0	601.8	623.6
70°	347.4	396.8	481.1	550.9	575.6
72.5°	295.1	344.5	433.2	501.5	526.2
75°	239.8	293.6	382.3	450.6	472.4
77.5°	184.6	244.2	332.9	385.2	392.5
80°	132.3	194.8	276.2	306.7	316.9
82.5°	93.0	149.7	203.5	223.9	229.7
85°	50.9	98.8	127.9	136.6	136.6
87.5°	21.8	42.2	50.9	52.3	53.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)