

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: P473814

Luminaire Tested: **24CZ2-45-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473814
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

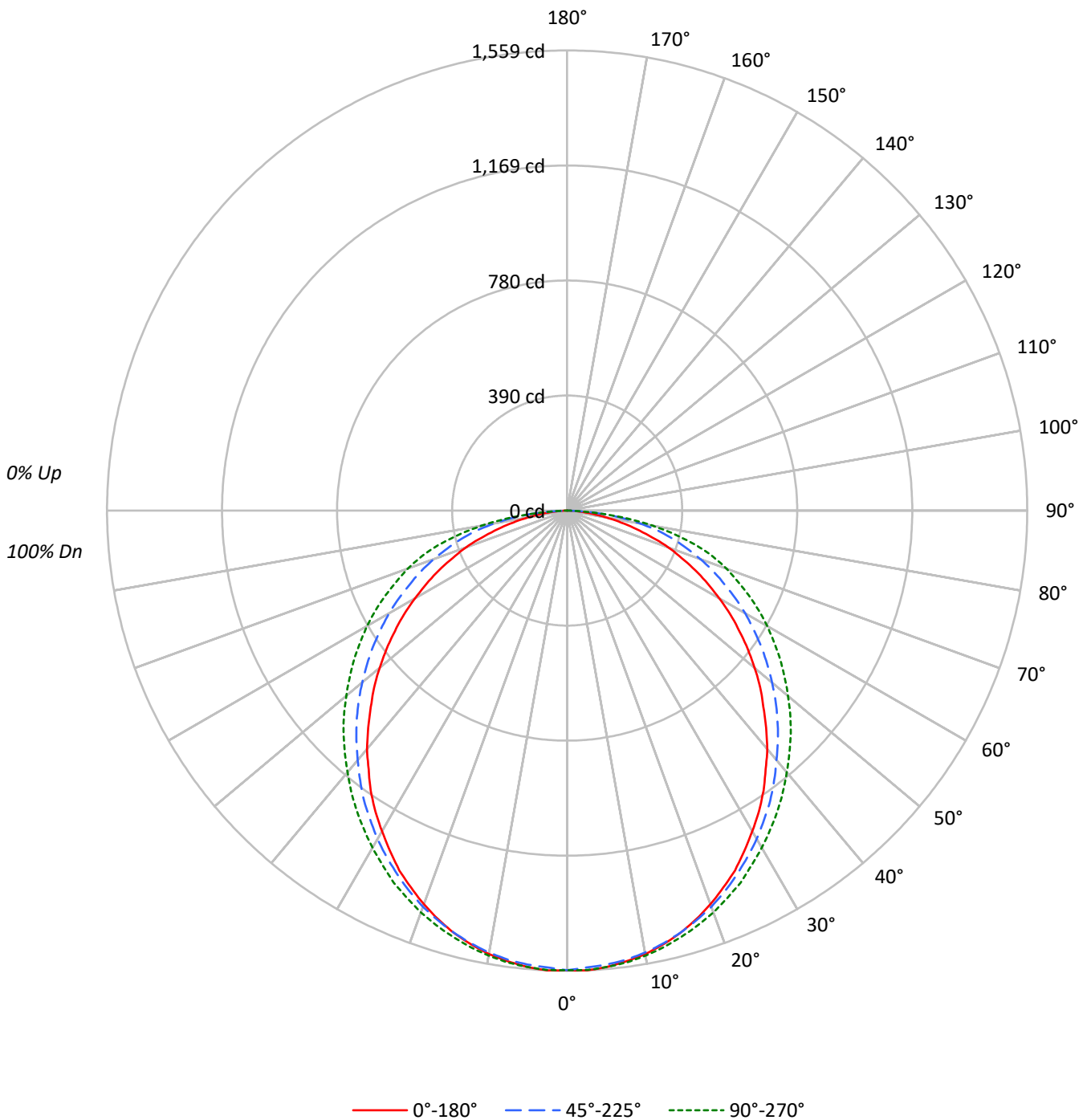
Lumens per Lamp: N/A
Luminaire Lumens: 4505.9 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.9
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	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2095	2095	2095
5°	2096	2085	2096
10°	2085	2078	2092
15°	2064	2062	2083
20°	2032	2045	2074
25°	1997	2020	2064
30°	1949	1996	2049
35°	1905	1971	2041
40°	1853	1938	2033
45°	1790	1918	2039
50°	1735	1897	2045
55°	1672	1883	2068
60°	1602	1875	2106
65°	1527	1868	2160
70°	1437	1887	2260
75°	1264	1926	2350
80°	1055	1940	2267
85°	753	1663	1686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	3.3
10°-20°	419.3	9.3
20°-30°	629.0	14.0
30°-40°	750.9	16.7
40°-50°	777.8	17.3
50°-60°	716.1	15.9
60°-70°	577.6	12.8
70°-80°	377.4	8.4
80°-90°	110.6	2.5
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°	1195.4	26.5
0°-40°	1946.4	43.2
0°-60°	3440.2	76.3
0°-90°	4505.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4505.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1552	1550	1544	1553	1552	147
15°	1481	1481	1481	1495	1495	417
25°	1345	1348	1360	1385	1390	619
35°	1160	1170	1200	1232	1243	724
45°	940	964	1008	1053	1072	727
55°	713	743	803	862	882	638
65°	480	512	587	654	678	474
75°	243	289	370	435	452	259
85°	49	84	108	114	109	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1557.1	1557.1	1557.1	1557.1	1557.1
2.5°	1559.3	1557.1	1549.1	1558.5	1557.8
5°	1552.0	1550.5	1544.0	1552.7	1552.0
7.5°	1540.3	1539.6	1534.5	1544.0	1544.0
10°	1525.8	1524.3	1520.7	1531.6	1530.9
12.5°	1505.4	1504.7	1502.5	1515.6	1514.9
15°	1481.4	1481.4	1480.6	1495.2	1495.2
17.5°	1452.3	1453.0	1455.9	1472.6	1473.4
20°	1419.5	1422.4	1428.2	1447.2	1448.6
22.5°	1382.4	1388.2	1396.2	1417.3	1419.5
25°	1345.2	1348.2	1360.5	1385.3	1390.4
27.5°	1300.1	1307.4	1323.4	1348.9	1354.0
30°	1254.3	1264.4	1284.8	1311.0	1319.0
32.5°	1209.1	1217.9	1241.9	1271.7	1281.2
35°	1159.6	1169.8	1199.7	1232.4	1242.6
37.5°	1105.0	1121.0	1152.3	1190.2	1201.1
40°	1054.8	1069.4	1103.6	1145.8	1157.4
42.5°	997.3	1015.5	1057.0	1099.9	1114.5
45°	940.5	963.8	1008.2	1053.3	1071.5
47.5°	887.4	906.3	958.7	1009.7	1025.7
50°	829.1	851.0	906.3	960.2	976.9
52.5°	771.6	797.8	853.9	910.7	928.9
55°	712.7	743.2	802.9	861.9	881.5
57.5°	655.9	686.5	748.3	810.9	831.3
60°	595.5	628.2	696.6	757.1	782.5
62.5°	537.2	570.0	642.1	707.6	731.6
65°	479.7	512.5	586.7	653.7	678.4
67.5°	420.0	455.7	535.0	599.8	623.9
70°	365.4	399.6	479.7	548.9	574.4
72.5°	302.8	343.6	425.1	493.5	517.6
75°	243.1	289.0	370.5	434.6	452.1
77.5°	187.8	233.7	315.2	363.2	374.2
80°	136.1	182.7	250.4	283.9	292.6
82.5°	88.1	136.1	181.3	203.8	206.7
85°	48.8	84.4	107.7	114.3	109.2
87.5°	17.5	32.0	31.3	25.5	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)