

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: P474021

Luminaire Tested: **24CZ2-40HE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474021
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

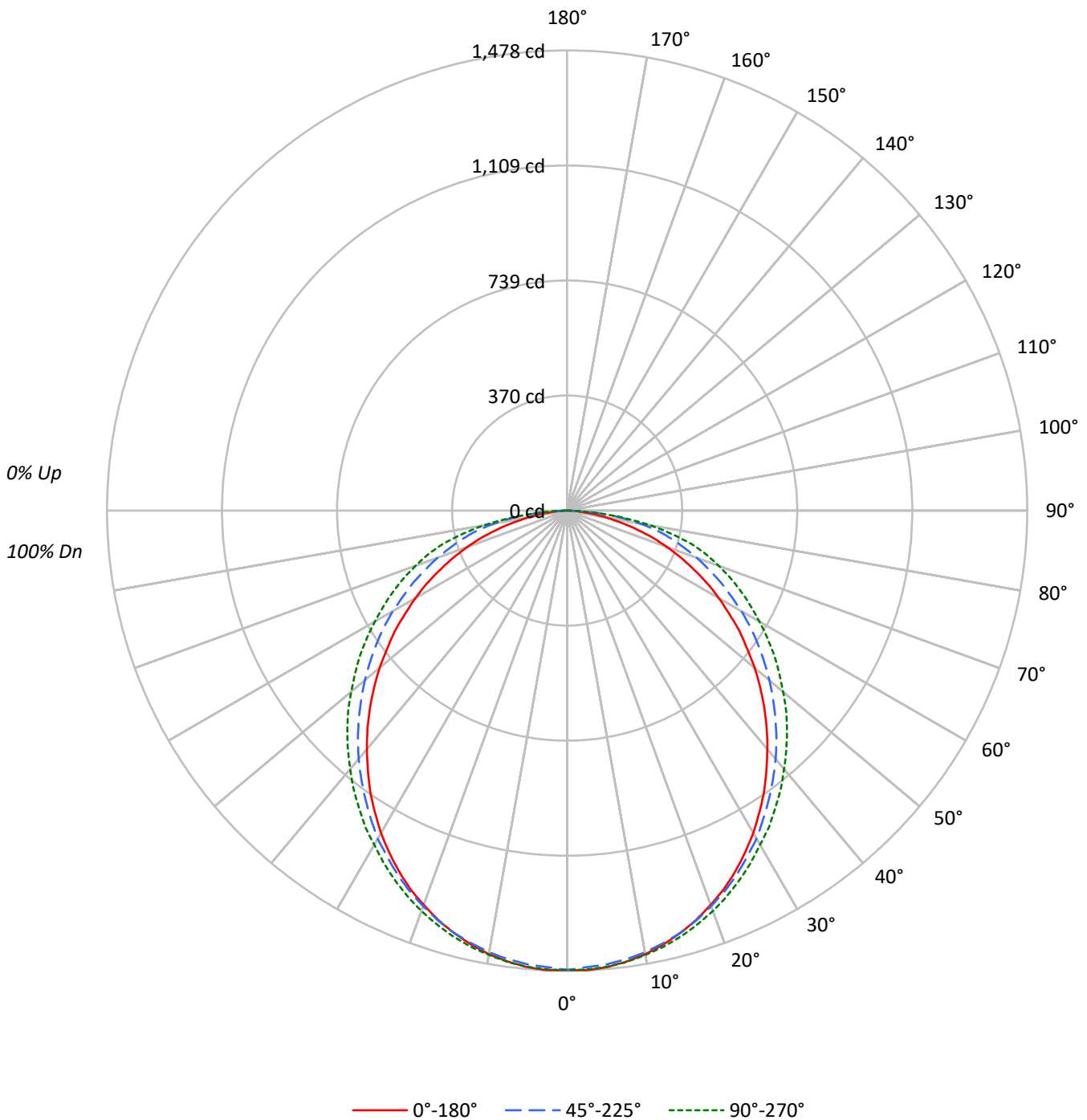
Lumens per Lamp: N/A
Luminaire Lumens: 4226.9 lumens
Efficiency: N/A
Efficacy: 137.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 30.7
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	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	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	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	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1985	1985	1985
5°	1988	1976	1986
10°	1977	1968	1980
15°	1957	1956	1972
20°	1930	1936	1959
25°	1898	1914	1944
30°	1858	1890	1925
35°	1811	1857	1915
40°	1757	1829	1904
45°	1704	1801	1900
50°	1647	1776	1895
55°	1588	1754	1905
60°	1515	1738	1919
65°	1435	1731	1965
70°	1338	1740	2035
75°	1191	1790	2144
80°	974	1829	2093
85°	685	1598	1629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.5	3.3
10°-20°	397.3	9.4
20°-30°	595.5	14.1
30°-40°	709.3	16.8
40°-50°	731.3	17.3
50°-60°	667.3	15.8
60°-70°	533.6	12.6
70°-80°	348.6	8.2
80°-90°	104.7	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°	1132.2	26.8
0°-40°	1841.5	43.6
0°-60°	3240.1	76.7
0°-90°	4226.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4226.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1472	1469	1463	1472	1470	140
15°	1405	1405	1404	1416	1416	396
25°	1278	1280	1289	1308	1309	588
35°	1102	1110	1130	1159	1166	689
45°	896	912	946	986	998	691
55°	677	696	748	797	812	603
65°	451	481	544	597	617	447
75°	229	267	344	400	412	243
85°	44	80	104	106	106	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1475.4	1475.4	1475.4	1475.4	1475.4
2.5°	1477.5	1475.4	1467.7	1476.8	1475.4
5°	1471.9	1469.1	1462.9	1471.9	1470.5
7.5°	1460.8	1459.4	1453.2	1463.6	1462.2
10°	1446.9	1445.5	1440.7	1451.1	1449.0
12.5°	1427.5	1426.8	1423.3	1435.8	1434.4
15°	1404.6	1405.3	1403.9	1415.7	1415.7
17.5°	1378.2	1377.5	1380.3	1394.8	1393.5
20°	1347.6	1348.3	1351.8	1368.5	1368.5
22.5°	1315.7	1315.0	1322.6	1339.3	1340.7
25°	1278.2	1280.3	1289.3	1308.1	1309.4
27.5°	1237.9	1241.4	1252.5	1274.0	1276.1
30°	1195.6	1199.7	1216.4	1236.5	1239.3
32.5°	1149.1	1158.1	1173.4	1199.1	1206.0
35°	1102.5	1110.2	1130.3	1158.8	1165.7
37.5°	1051.2	1063.7	1086.6	1117.8	1126.8
40°	1000.5	1013.0	1041.4	1074.1	1083.8
42.5°	949.1	962.3	994.9	1031.7	1042.1
45°	895.6	911.6	946.3	985.9	998.4
47.5°	840.8	859.5	897.0	940.1	954.0
50°	786.6	805.4	848.4	892.9	905.4
52.5°	728.3	751.9	797.7	845.7	858.2
55°	676.9	696.4	747.8	797.1	812.3
57.5°	616.5	642.9	697.8	747.8	762.3
60°	563.1	587.4	645.7	696.4	713.0
62.5°	508.9	533.9	592.2	649.9	665.1
65°	450.6	481.1	543.6	597.1	617.2
67.5°	395.1	427.0	490.9	547.8	568.6
70°	340.2	372.8	442.3	500.6	517.3
72.5°	286.1	320.1	392.3	449.2	468.7
75°	229.1	267.3	344.4	399.9	412.4
77.5°	175.7	218.0	295.8	333.3	342.3
80°	125.7	172.2	236.1	263.1	270.1
82.5°	82.6	127.8	176.4	190.9	188.8
85°	44.4	79.8	103.5	105.5	105.5
87.5°	17.4	31.9	32.6	25.0	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)