

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: P474083

Luminaire Tested: **24CZ2-35VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474083
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3681.5 lumens
Efficiency: N/A
Efficacy: 154.0 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

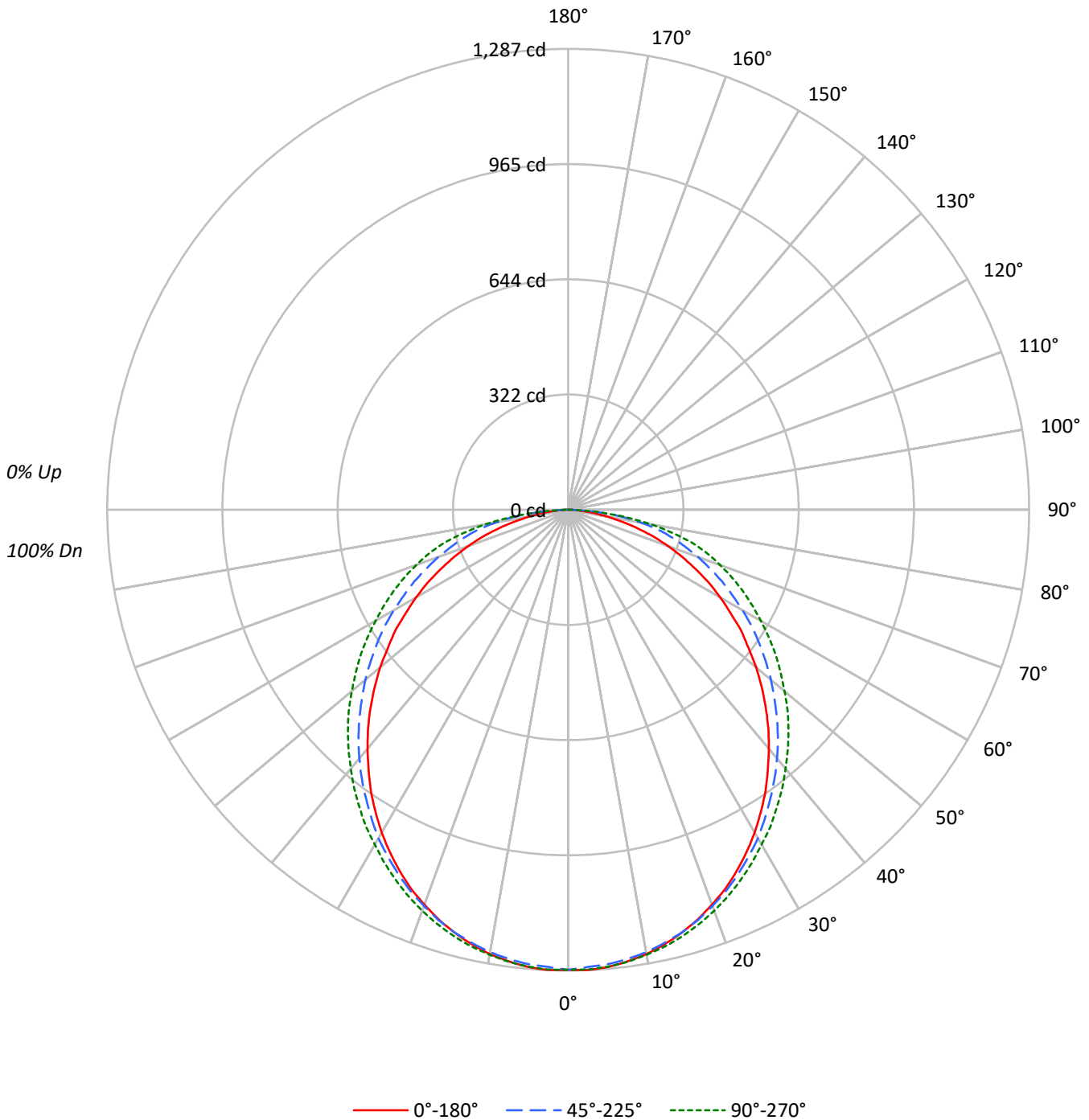
Input Watts (W): 23.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1729	1729	1729
5°	1732	1721	1730
10°	1722	1714	1724
15°	1704	1703	1718
20°	1681	1686	1707
25°	1653	1667	1693
30°	1618	1646	1677
35°	1577	1617	1668
40°	1531	1593	1658
45°	1484	1568	1655
50°	1434	1547	1650
55°	1383	1528	1660
60°	1320	1513	1671
65°	1250	1507	1712
70°	1166	1515	1772
75°	1038	1559	1867
80°	848	1593	1822
85°	597	1391	1419



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.5	3.3
10°-20°	346.0	9.4
20°-30°	518.7	14.1
30°-40°	617.7	16.8
40°-50°	636.9	17.3
50°-60°	581.2	15.8
60°-70°	464.8	12.6
70°-80°	303.6	8.2
80°-90°	91.2	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°	986.1	26.8
0°-40°	1603.9	43.6
0°-60°	2822.0	76.7
0°-90°	3681.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3681.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1282	1280	1274	1282	1281	122
15°	1223	1224	1223	1233	1233	345
25°	1113	1115	1123	1139	1140	513
35°	960	967	984	1009	1015	600
45°	780	794	824	859	870	602
55°	590	606	651	694	708	525
65°	392	419	474	520	538	389
75°	200	233	300	348	359	212
85°	39	70	90	92	92	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1285.0	1285.0	1285.0	1285.0	1285.0
2.5°	1286.8	1285.0	1278.4	1286.2	1285.0
5°	1282.0	1279.6	1274.1	1282.0	1280.8
7.5°	1272.3	1271.1	1265.7	1274.7	1273.5
10°	1260.2	1259.0	1254.8	1263.8	1262.0
12.5°	1243.3	1242.7	1239.7	1250.5	1249.3
15°	1223.3	1223.9	1222.7	1233.0	1233.0
17.5°	1200.4	1199.7	1202.2	1214.9	1213.7
20°	1173.7	1174.3	1177.4	1191.9	1191.9
22.5°	1145.9	1145.3	1152.0	1166.5	1167.7
25°	1113.3	1115.1	1122.9	1139.3	1140.5
27.5°	1078.2	1081.2	1090.9	1109.6	1111.5
30°	1041.3	1044.9	1059.5	1077.0	1079.4
32.5°	1000.8	1008.7	1022.0	1044.3	1050.4
35°	960.3	966.9	984.5	1009.3	1015.3
37.5°	915.5	926.4	946.4	973.6	981.4
40°	871.4	882.3	907.1	935.5	944.0
42.5°	826.6	838.1	866.6	898.6	907.7
45°	780.1	794.0	824.2	858.7	869.6
47.5°	732.3	748.6	781.3	818.8	830.9
50°	685.1	701.5	739.0	777.7	788.5
52.5°	634.3	654.9	694.8	736.5	747.4
55°	589.6	606.5	651.3	694.2	707.5
57.5°	537.0	560.0	607.7	651.3	664.0
60°	490.4	511.6	562.4	606.5	621.0
62.5°	443.3	465.0	515.8	566.0	579.3
65°	392.5	419.1	473.5	520.1	537.6
67.5°	344.1	371.9	427.5	477.1	495.3
70°	296.3	324.7	385.2	436.0	450.5
72.5°	249.1	278.8	341.7	391.2	408.2
75°	199.6	232.8	299.9	348.3	359.2
77.5°	153.0	189.9	257.6	290.3	298.1
80°	109.5	150.0	205.6	229.2	235.2
82.5°	72.0	111.3	153.6	166.3	164.5
85°	38.7	69.5	90.1	91.9	91.9
87.5°	15.1	27.8	28.4	21.8	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)