

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: P473871

Luminaire Tested: **24CZ2-40HE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473871
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4222.7 lumens
Efficiency: N/A
Efficacy: 137.5 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

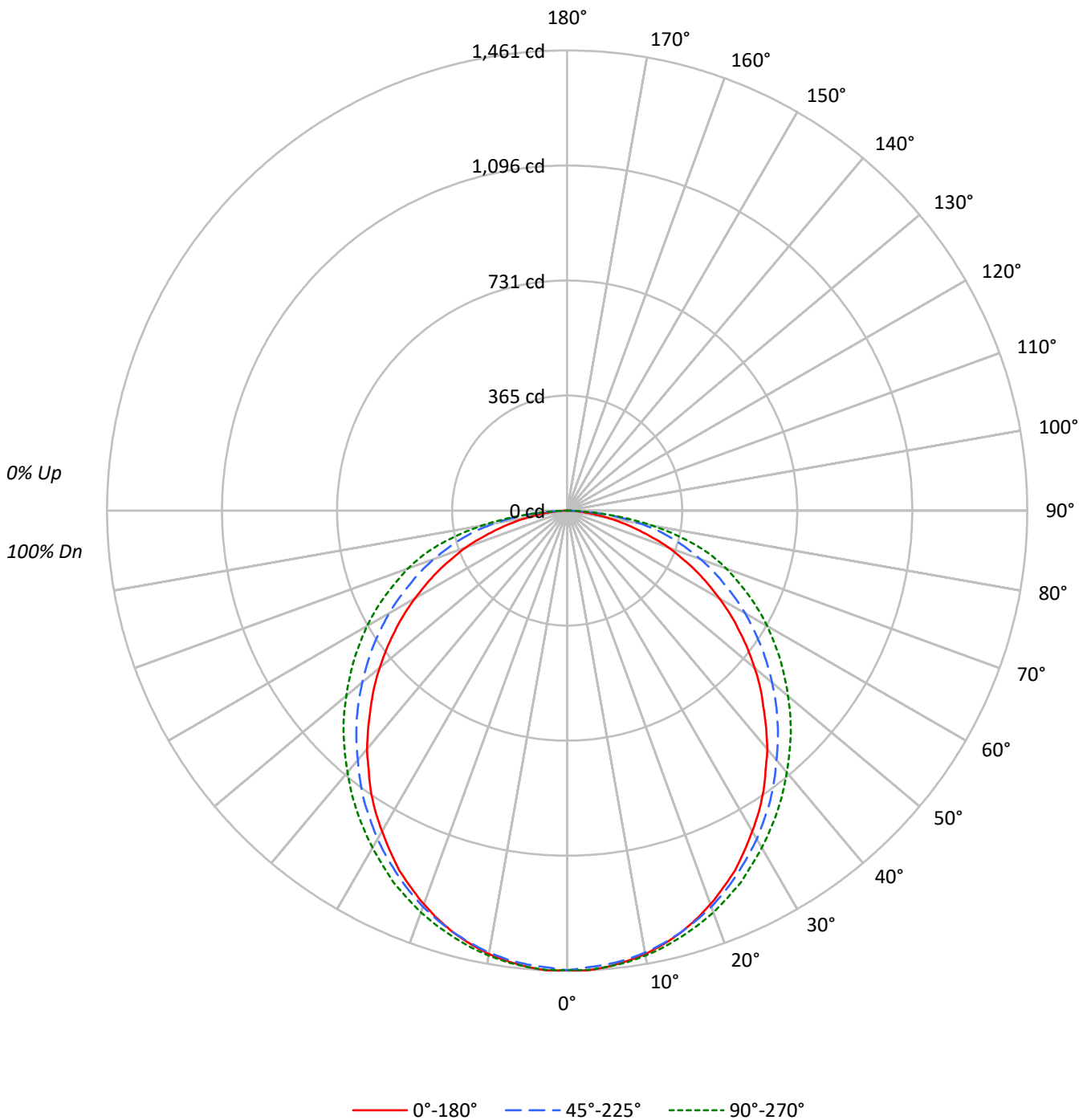
Input Watts (W): 30.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1963	1963	1963
5°	1964	1954	1964
10°	1954	1947	1960
15°	1934	1933	1952
20°	1905	1917	1944
25°	1872	1893	1934
30°	1826	1871	1920
35°	1785	1847	1913
40°	1736	1816	1905
45°	1677	1798	1911
50°	1626	1778	1916
55°	1567	1765	1938
60°	1502	1757	1974
65°	1431	1750	2024
70°	1347	1769	2117
75°	1185	1805	2202
80°	989	1819	2125
85°	706	1559	1579



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.9	3.3
10°-20°	392.9	9.3
20°-30°	589.4	14.0
30°-40°	703.7	16.7
40°-50°	728.9	17.3
50°-60°	671.1	15.9
60°-70°	541.3	12.8
70°-80°	353.7	8.4
80°-90°	103.7	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°	1120.3	26.5
0°-40°	1824.0	43.2
0°-60°	3224.0	76.3
0°-90°	4222.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4222.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1459	1459	1459	1459	1459	
5°	1454	1453	1447	1455	1454	138
15°	1388	1388	1388	1401	1401	391
25°	1261	1263	1275	1298	1303	580
35°	1087	1096	1124	1155	1164	679
45°	881	903	945	987	1004	681
55°	668	696	752	808	826	598
65°	450	480	550	613	636	445
75°	228	271	347	407	424	243
85°	46	79	101	107	102	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1459.2	1459.2	1459.2	1459.2	1459.2
2.5°	1461.2	1459.2	1451.7	1460.6	1459.9
5°	1454.4	1453.1	1446.9	1455.1	1454.4
7.5°	1443.5	1442.8	1438.0	1446.9	1446.9
10°	1429.9	1428.5	1425.1	1435.3	1434.6
12.5°	1410.8	1410.1	1408.0	1420.3	1419.6
15°	1388.3	1388.3	1387.6	1401.2	1401.2
17.5°	1361.0	1361.6	1364.4	1380.1	1380.7
20°	1330.3	1333.0	1338.5	1356.2	1357.6
22.5°	1295.5	1300.9	1308.4	1328.2	1330.3
25°	1260.7	1263.4	1275.0	1298.2	1303.0
27.5°	1218.4	1225.2	1240.2	1264.1	1268.9
30°	1175.4	1185.0	1204.1	1228.6	1236.1
32.5°	1133.1	1141.3	1163.8	1191.8	1200.6
35°	1086.7	1096.3	1124.2	1154.9	1164.5
37.5°	1035.6	1050.6	1079.9	1115.4	1125.6
40°	988.5	1002.1	1034.2	1073.8	1084.7
42.5°	934.6	951.7	990.5	1030.8	1044.4
45°	881.4	903.2	944.8	987.1	1004.2
47.5°	831.6	849.3	898.4	946.2	961.2
50°	777.0	797.5	849.3	899.8	915.5
52.5°	723.1	747.7	800.2	853.4	870.5
55°	667.9	696.5	752.5	807.7	826.1
57.5°	614.7	643.3	701.3	760.0	779.1
60°	558.0	588.7	652.9	709.5	733.4
62.5°	503.5	534.2	601.7	663.1	685.6
65°	449.6	480.3	549.8	612.6	635.8
67.5°	393.6	427.0	501.4	562.1	584.6
70°	342.5	374.5	449.6	514.4	538.2
72.5°	283.8	322.0	398.4	462.5	485.0
75°	227.9	270.8	347.2	407.3	423.6
77.5°	176.0	219.0	295.4	340.4	350.6
80°	127.6	171.2	234.7	266.1	274.2
82.5°	82.5	127.6	169.9	191.0	193.7
85°	45.7	79.1	101.0	107.1	102.3
87.5°	16.4	30.0	29.3	23.9	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)