

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: P473872

Luminaire Tested: **24CZ2-45HE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473872
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-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: 4801.5 lumens
Efficiency: N/A
Efficacy: 136.0 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

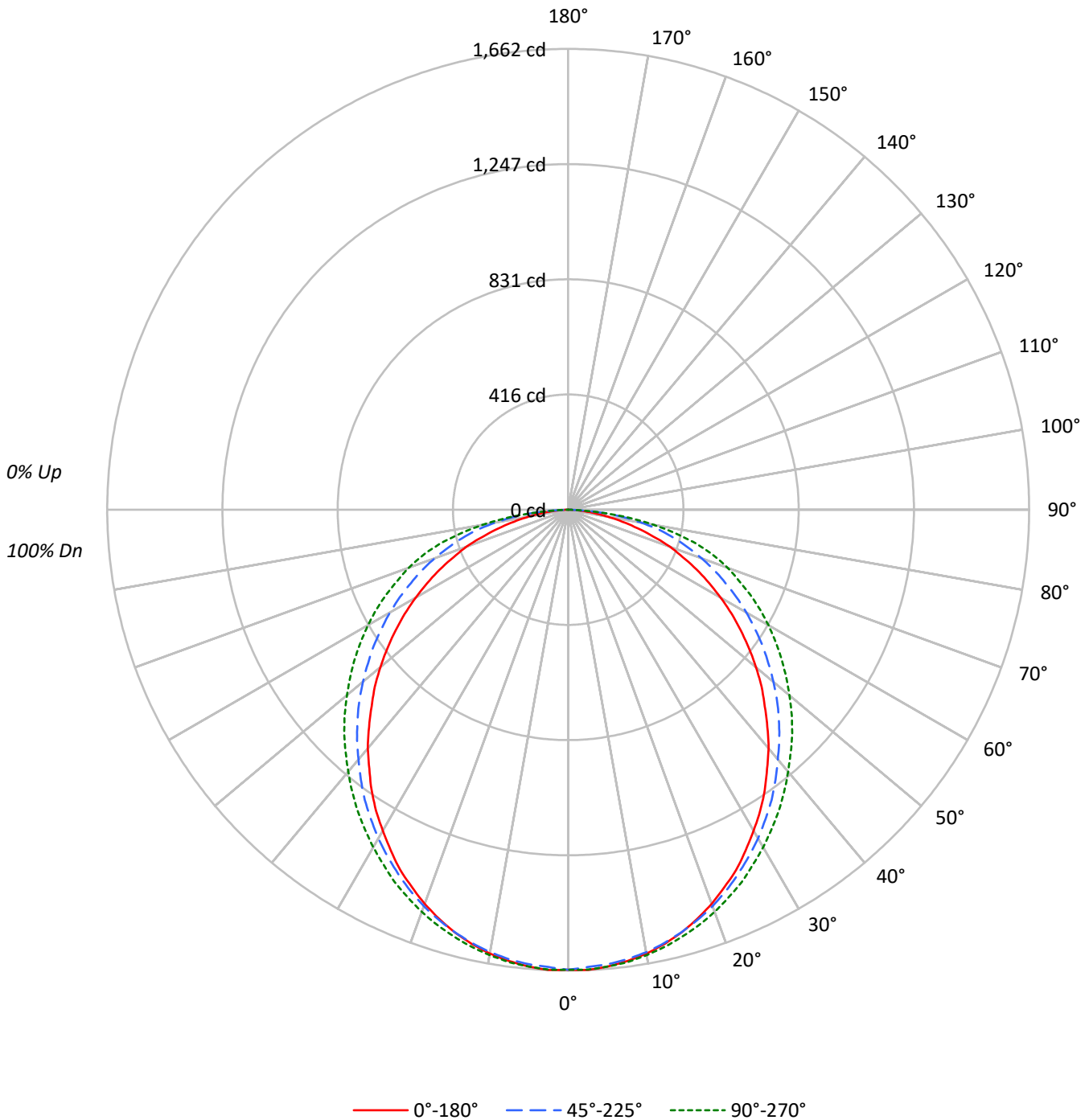
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2232	2232	2232
5°	2234	2222	2234
10°	2221	2214	2229
15°	2199	2198	2219
20°	2166	2179	2210
25°	2128	2152	2200
30°	2076	2127	2184
35°	2030	2100	2175
40°	1974	2065	2166
45°	1907	2044	2173
50°	1849	2021	2179
55°	1781	2007	2204
60°	1707	1998	2244
65°	1628	1990	2301
70°	1532	2011	2408
75°	1347	2052	2504
80°	1124	2067	2416
85°	803	1772	1797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	3.3
10°-20°	446.8	9.3
20°-30°	670.2	14.0
30°-40°	800.2	16.7
40°-50°	828.8	17.3
50°-60°	763.0	15.9
60°-70°	615.5	12.8
70°-80°	402.2	8.4
80°-90°	117.9	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°	1273.8	26.5
0°-40°	2074.0	43.2
0°-60°	3665.9	76.3
0°-90°	4801.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4801.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1659	1659	1659	1659	1659	
5°	1654	1652	1645	1654	1654	157
15°	1578	1578	1578	1593	1593	445
25°	1434	1437	1450	1476	1482	659
35°	1236	1246	1278	1313	1324	772
45°	1002	1027	1074	1122	1142	775
55°	759	792	856	918	939	680
65°	511	546	625	697	723	505
75°	259	308	395	463	482	277
85°	52	90	115	122	116	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1659.2	1659.2	1659.2	1659.2	1659.2
2.5°	1661.5	1659.2	1650.7	1660.8	1660.0
5°	1653.8	1652.2	1645.2	1654.5	1653.8
7.5°	1641.4	1640.6	1635.2	1645.2	1645.2
10°	1625.8	1624.3	1620.4	1632.1	1631.3
12.5°	1604.1	1603.4	1601.0	1615.0	1614.2
15°	1578.5	1578.5	1577.8	1593.3	1593.3
17.5°	1547.5	1548.3	1551.4	1569.2	1570.0
20°	1512.6	1515.7	1521.9	1542.1	1543.6
22.5°	1473.0	1479.2	1487.8	1510.3	1512.6
25°	1433.5	1436.6	1449.8	1476.1	1481.6
27.5°	1385.4	1393.1	1410.2	1437.4	1442.8
30°	1336.5	1347.4	1369.1	1397.0	1405.6
32.5°	1288.4	1297.7	1323.3	1355.1	1365.2
35°	1235.7	1246.5	1278.3	1313.2	1324.1
37.5°	1177.5	1194.6	1227.9	1268.3	1279.9
40°	1124.0	1139.5	1175.9	1220.9	1233.3
42.5°	1062.7	1082.1	1126.3	1172.1	1187.6
45°	1002.2	1027.0	1074.3	1122.4	1141.8
47.5°	945.6	965.7	1021.6	1075.9	1092.9
50°	883.5	906.8	965.7	1023.1	1041.0
52.5°	822.2	850.2	909.9	970.4	989.8
55°	759.4	792.0	855.6	918.4	939.4
57.5°	698.9	731.5	797.4	864.1	885.8
60°	634.5	669.4	742.3	806.7	833.9
62.5°	572.5	607.4	684.2	754.0	779.6
65°	511.2	546.1	625.2	696.6	722.9
67.5°	447.6	485.6	570.1	639.2	664.8
70°	389.4	425.9	511.2	584.9	612.0
72.5°	322.7	366.1	453.0	525.9	551.5
75°	259.1	307.9	394.8	463.1	481.7
77.5°	200.1	249.0	335.9	387.1	398.7
80°	145.1	194.7	266.8	302.5	311.8
82.5°	93.9	145.1	193.1	217.2	220.3
85°	52.0	90.0	114.8	121.8	116.4
87.5°	18.6	34.1	33.4	27.1	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)