

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: P474072

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474072
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4897.6 lumens
Efficiency: N/A
Efficacy: 138.7 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

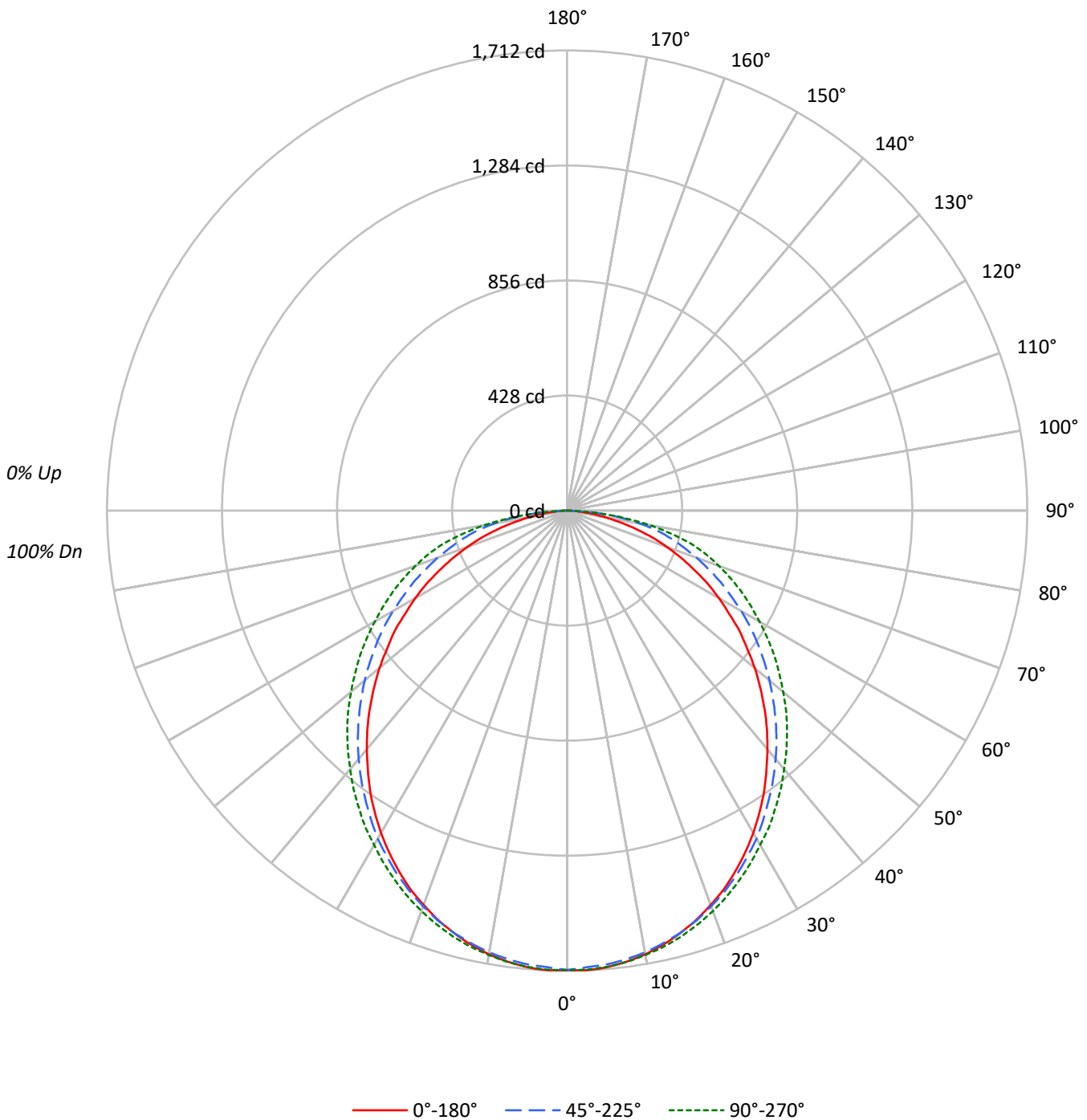
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2300	2300	2300
5°	2303	2289	2301
10°	2291	2281	2294
15°	2267	2266	2285
20°	2236	2243	2270
25°	2199	2218	2252
30°	2152	2190	2231
35°	2098	2151	2219
40°	2036	2119	2206
45°	1975	2086	2201
50°	1908	2058	2196
55°	1840	2032	2208
60°	1756	2013	2223
65°	1662	2005	2277
70°	1551	2016	2358
75°	1380	2074	2484
80°	1128	2119	2424
85°	795	1851	1888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.6	3.3
10°-20°	460.3	9.4
20°-30°	690.0	14.1
30°-40°	821.8	16.8
40°-50°	847.3	17.3
50°-60°	773.2	15.8
60°-70°	618.3	12.6
70°-80°	403.8	8.2
80°-90°	121.3	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
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0°-30°	1311.9	26.8
0°-40°	2133.7	43.6
0°-60°	3754.2	76.7
0°-90°	4897.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4897.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1710	1710	1710	1710	1710	
5°	1706	1702	1695	1706	1704	162
15°	1627	1628	1627	1640	1640	459
25°	1481	1483	1494	1516	1517	682
35°	1278	1286	1310	1343	1351	798
45°	1038	1056	1096	1142	1157	800
55°	784	807	866	924	941	699
65°	522	558	630	692	715	518
75°	266	310	399	463	478	282
85°	52	92	120	122	122	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1709.5	1709.5	1709.5	1709.5	1709.5
2.5°	1711.9	1709.5	1700.6	1711.1	1709.5
5°	1705.5	1702.2	1695.0	1705.5	1703.8
7.5°	1692.6	1691.0	1683.7	1695.8	1694.2
10°	1676.5	1674.9	1669.3	1681.3	1678.9
12.5°	1654.0	1653.2	1649.1	1663.6	1662.0
15°	1627.4	1628.2	1626.6	1640.3	1640.3
17.5°	1596.9	1596.1	1599.3	1616.2	1614.6
20°	1561.5	1562.3	1566.3	1585.6	1585.6
22.5°	1524.5	1523.6	1532.5	1551.8	1553.4
25°	1481.0	1483.4	1493.9	1515.6	1517.2
27.5°	1434.4	1438.4	1451.2	1476.2	1478.6
30°	1385.3	1390.1	1409.4	1432.7	1436.0
32.5°	1331.4	1341.8	1359.5	1389.3	1397.3
35°	1277.5	1286.3	1309.7	1342.6	1350.7
37.5°	1218.0	1232.4	1259.0	1295.2	1305.6
40°	1159.2	1173.7	1206.7	1244.5	1255.8
42.5°	1099.7	1115.0	1152.8	1195.4	1207.5
45°	1037.8	1056.3	1096.5	1142.3	1156.8
47.5°	974.2	995.9	1039.4	1089.2	1105.3
50°	911.5	933.2	983.1	1034.5	1049.0
52.5°	843.9	871.2	924.3	979.8	994.3
55°	784.3	806.9	866.4	923.5	941.2
57.5°	714.4	744.9	808.5	866.4	883.3
60°	652.4	680.6	748.1	806.9	826.2
62.5°	589.7	618.6	686.2	753.0	770.7
65°	522.1	557.5	629.9	691.8	715.2
67.5°	457.7	494.7	568.8	634.7	658.9
70°	394.2	432.0	512.4	580.0	599.3
72.5°	331.4	370.9	454.5	520.5	543.0
75°	265.5	309.7	399.0	463.4	477.8
77.5°	203.5	252.6	342.7	386.1	396.6
80°	145.6	199.5	273.5	304.9	312.9
82.5°	95.7	148.0	204.3	221.2	218.8
85°	51.5	92.5	119.9	122.3	122.3
87.5°	20.1	37.0	37.8	29.0	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)