

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: P473822

Luminaire Tested: **24CZ2-45HE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473822
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,RIBBED LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4711.9 lumens
Efficiency: N/A
Efficacy: 133.5 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

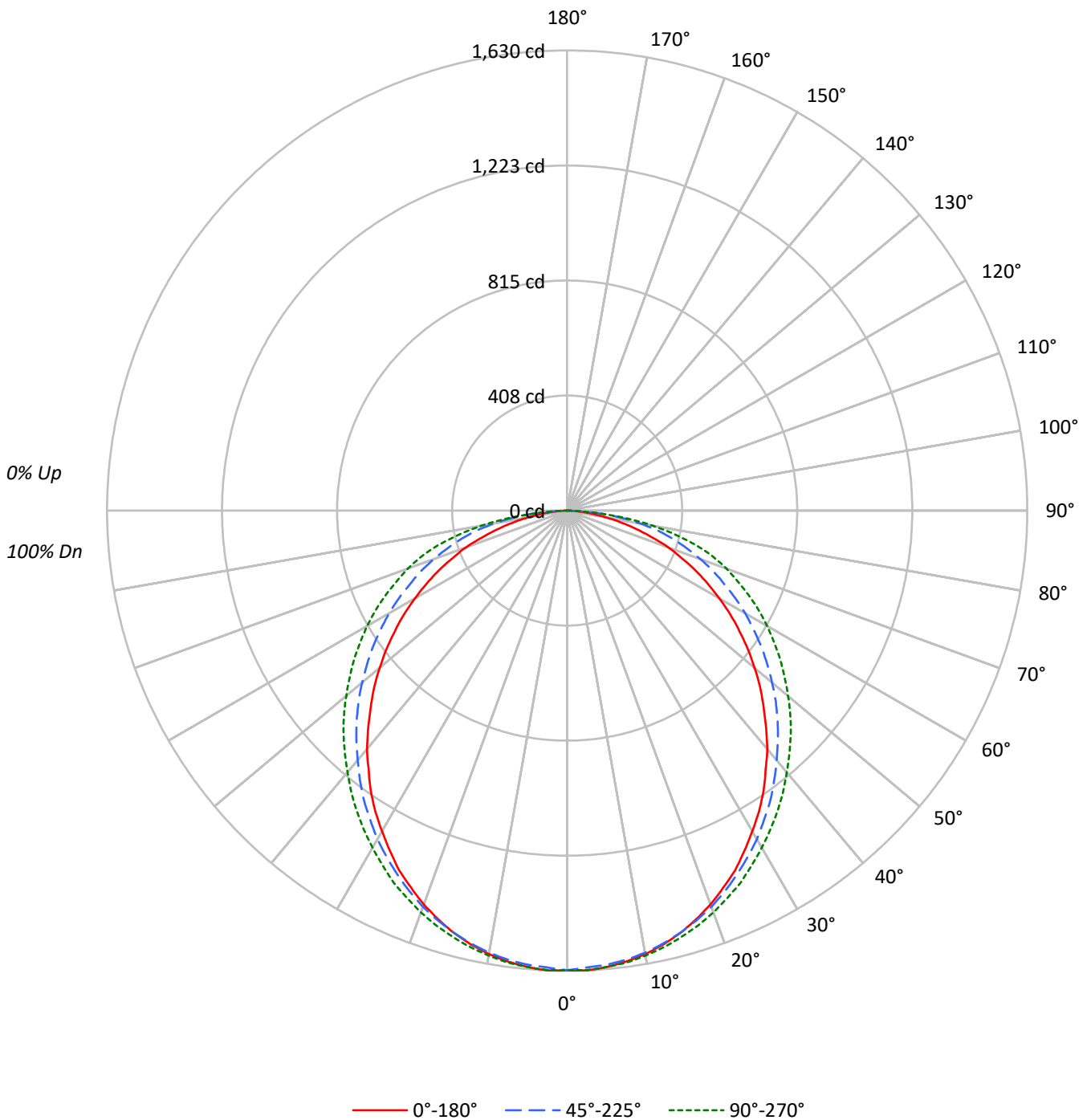
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2191	2191	2191
5°	2192	2181	2192
10°	2180	2173	2187
15°	2158	2157	2178
20°	2125	2138	2169
25°	2088	2112	2158
30°	2038	2087	2143
35°	1992	2061	2134
40°	1937	2027	2126
45°	1871	2006	2132
50°	1815	1984	2138
55°	1748	1970	2162
60°	1676	1960	2202
65°	1597	1953	2259
70°	1503	1973	2363
75°	1322	2014	2457
80°	1103	2029	2371
85°	787	1740	1763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.9	3.3
10°-20°	438.4	9.3
20°-30°	657.7	14.0
30°-40°	785.3	16.7
40°-50°	813.4	17.3
50°-60°	748.8	15.9
60°-70°	604.0	12.8
70°-80°	394.7	8.4
80°-90°	115.7	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°	1250.1	26.5
0°-40°	2035.3	43.2
0°-60°	3597.5	76.3
0°-90°	4711.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4711.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1623	1621	1615	1624	1623	154
15°	1549	1549	1548	1564	1564	436
25°	1407	1410	1423	1449	1454	647
35°	1213	1223	1254	1289	1299	757
45°	984	1008	1054	1102	1120	760
55°	745	777	840	901	922	667
65°	502	536	614	684	710	496
75°	254	302	388	454	473	271
85°	51	88	113	120	114	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1628.3	1628.3	1628.3	1628.3	1628.3
2.5°	1630.5	1628.3	1619.9	1629.8	1629.0
5°	1622.9	1621.4	1614.6	1623.7	1622.9
7.5°	1610.8	1610.0	1604.7	1614.6	1614.6
10°	1595.5	1594.0	1590.2	1601.6	1600.9
12.5°	1574.2	1573.5	1571.2	1584.9	1584.1
15°	1549.1	1549.1	1548.3	1563.6	1563.6
17.5°	1518.6	1519.4	1522.5	1540.0	1540.7
20°	1484.4	1487.4	1493.5	1513.3	1514.8
22.5°	1445.6	1451.7	1460.0	1482.1	1484.4
25°	1406.7	1409.8	1422.7	1448.6	1453.9
27.5°	1359.6	1367.2	1383.9	1410.6	1415.9
30°	1311.6	1322.3	1343.6	1371.0	1379.3
32.5°	1264.4	1273.5	1298.7	1329.9	1339.8
35°	1212.6	1223.3	1254.5	1288.8	1299.4
37.5°	1155.5	1172.3	1205.0	1244.6	1256.0
40°	1103.0	1118.2	1154.0	1198.2	1210.4
42.5°	1042.9	1061.9	1105.3	1150.2	1165.4
45°	983.5	1007.9	1054.3	1101.5	1120.5
47.5°	927.9	947.7	1002.5	1055.8	1072.6
50°	867.0	889.9	947.7	1004.1	1021.6
52.5°	806.9	834.3	892.9	952.3	971.3
55°	745.2	777.2	839.6	901.3	921.8
57.5°	685.9	717.8	782.5	848.0	869.3
60°	622.7	656.9	728.5	791.7	818.3
62.5°	561.8	596.0	671.4	739.9	765.0
65°	501.6	535.9	613.5	683.6	709.5
67.5°	439.2	476.5	559.5	627.3	652.4
70°	382.1	417.9	501.6	574.0	600.6
72.5°	316.7	359.3	444.6	516.1	541.2
75°	254.3	302.2	387.5	454.5	472.7
77.5°	196.4	244.4	329.6	379.9	391.3
80°	142.3	191.1	261.9	296.9	306.0
82.5°	92.1	142.3	189.5	213.1	216.2
85°	51.0	88.3	112.7	119.5	114.2
87.5°	18.3	33.5	32.7	26.6	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)