

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: P474422

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474422
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3817.3 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

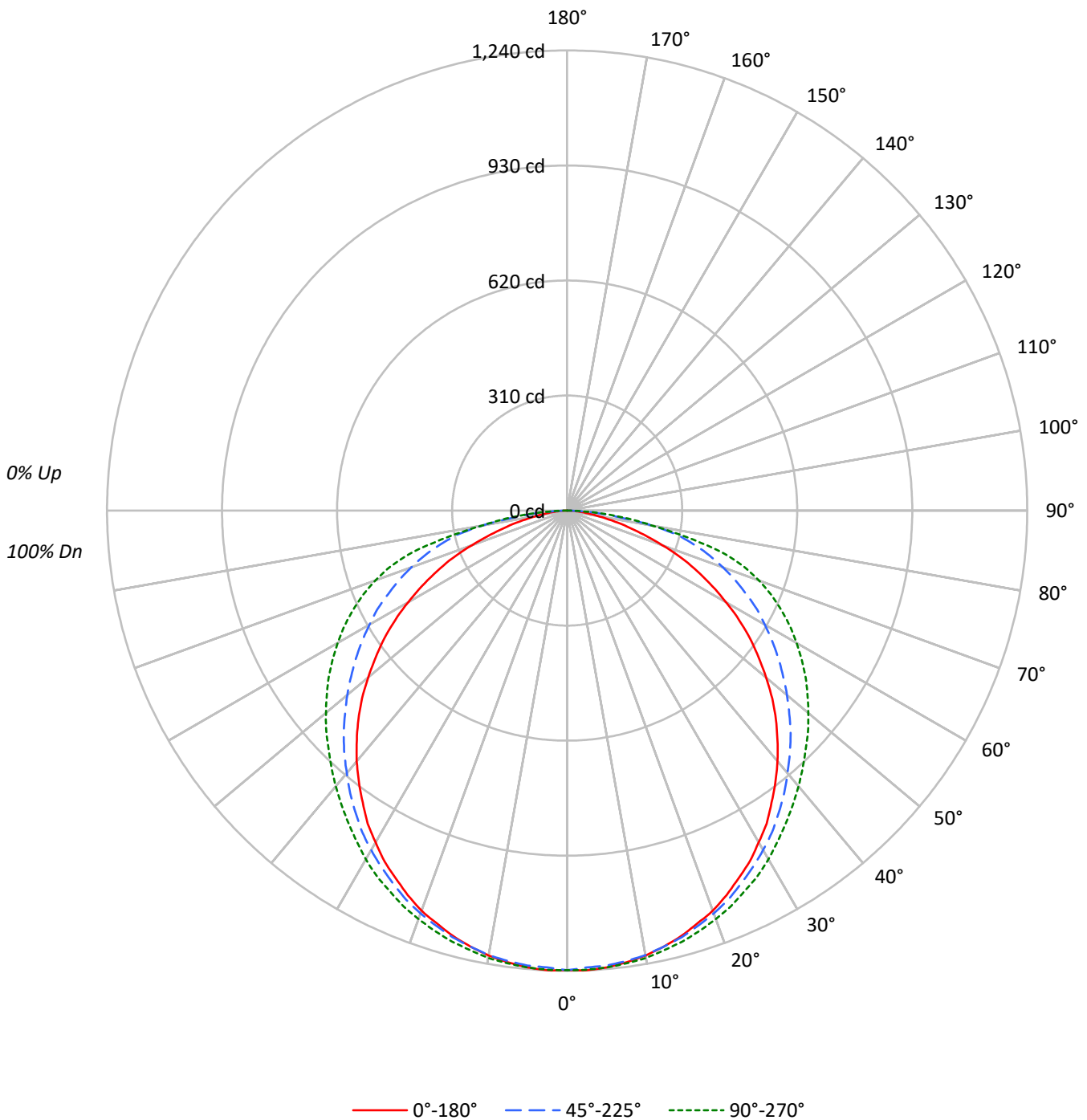
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1666	1666	1666
5°	1669	1662	1669
10°	1664	1662	1672
15°	1654	1658	1674
20°	1643	1654	1677
25°	1623	1647	1680
30°	1604	1641	1686
35°	1578	1633	1688
40°	1549	1623	1704
45°	1514	1621	1730
50°	1465	1619	1776
55°	1413	1631	1841
60°	1333	1655	1922
65°	1231	1694	2030
70°	1075	1754	2163
75°	872	1844	2235
80°	645	1808	1808
85°	494	1332	1504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.3	3.1
10°-20°	336.9	8.8
20°-30°	512.9	13.4
30°-40°	622.8	16.3
40°-50°	658.0	17.2
50°-60°	620.9	16.3
60°-70°	516.2	13.5
70°-80°	339.6	8.9
80°-90°	92.6	2.4
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°	967.2	25.3
0°-40°	1590.0	41.7
0°-60°	2868.8	75.2
0°-90°	3817.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3817.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1238	1238	1238	1238	1238	
5°	1235	1235	1230	1235	1235	117
15°	1187	1189	1191	1202	1202	335
25°	1093	1099	1109	1128	1131	504
35°	960	972	994	1020	1028	601
45°	796	812	852	893	909	613
55°	602	628	695	761	785	537
65°	387	432	532	610	638	382
75°	168	245	355	420	430	181
85°	32	70	86	96	97	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1238.5	1238.5	1238.5	1238.5	1238.5
2.5°	1240.1	1238.5	1232.1	1238.5	1238.5
5°	1235.4	1235.4	1230.5	1235.4	1235.4
7.5°	1227.4	1227.4	1224.1	1230.5	1230.5
10°	1217.7	1217.7	1216.2	1224.1	1224.1
12.5°	1203.4	1204.9	1203.4	1212.9	1212.9
15°	1187.3	1189.0	1190.6	1201.8	1201.8
17.5°	1166.7	1169.8	1173.1	1185.7	1187.3
20°	1147.5	1149.0	1155.3	1169.8	1171.4
22.5°	1121.9	1126.6	1134.7	1149.0	1153.9
25°	1093.0	1099.4	1109.1	1128.3	1131.4
27.5°	1066.0	1070.7	1083.5	1104.3	1110.7
30°	1032.3	1040.4	1056.3	1077.1	1085.1
32.5°	1000.4	1008.4	1027.6	1049.9	1056.3
35°	960.5	971.6	994.0	1019.5	1027.6
37.5°	922.1	933.3	960.5	989.2	998.9
40°	882.1	894.9	923.8	957.2	970.0
42.5°	839.0	856.5	888.5	925.2	939.7
45°	795.8	811.9	851.8	893.2	909.3
47.5°	749.6	768.8	811.9	861.4	880.6
50°	700.0	724.0	773.5	827.8	848.6
52.5°	650.5	677.6	733.5	794.2	816.7
55°	602.4	628.0	695.1	760.7	784.7
57.5°	549.8	581.8	655.3	725.5	749.6
60°	495.3	530.6	615.2	688.7	714.3
62.5°	441.0	481.1	576.9	650.5	677.6
65°	386.8	431.5	532.2	610.5	637.7
67.5°	333.9	383.5	490.6	569.0	596.0
70°	273.3	335.6	445.8	522.6	549.8
72.5°	217.3	289.3	402.7	474.7	498.6
75°	167.8	244.6	354.8	420.2	429.9
77.5°	123.0	199.8	305.2	327.5	329.2
80°	83.2	159.8	233.4	230.1	233.4
82.5°	54.3	119.9	147.0	164.7	166.2
85°	32.0	70.4	86.3	96.0	97.4
87.5°	15.9	23.9	30.3	32.0	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)