

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: P474943

Luminaire Tested: **22CZ2-34HE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474943
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-34HE-S-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

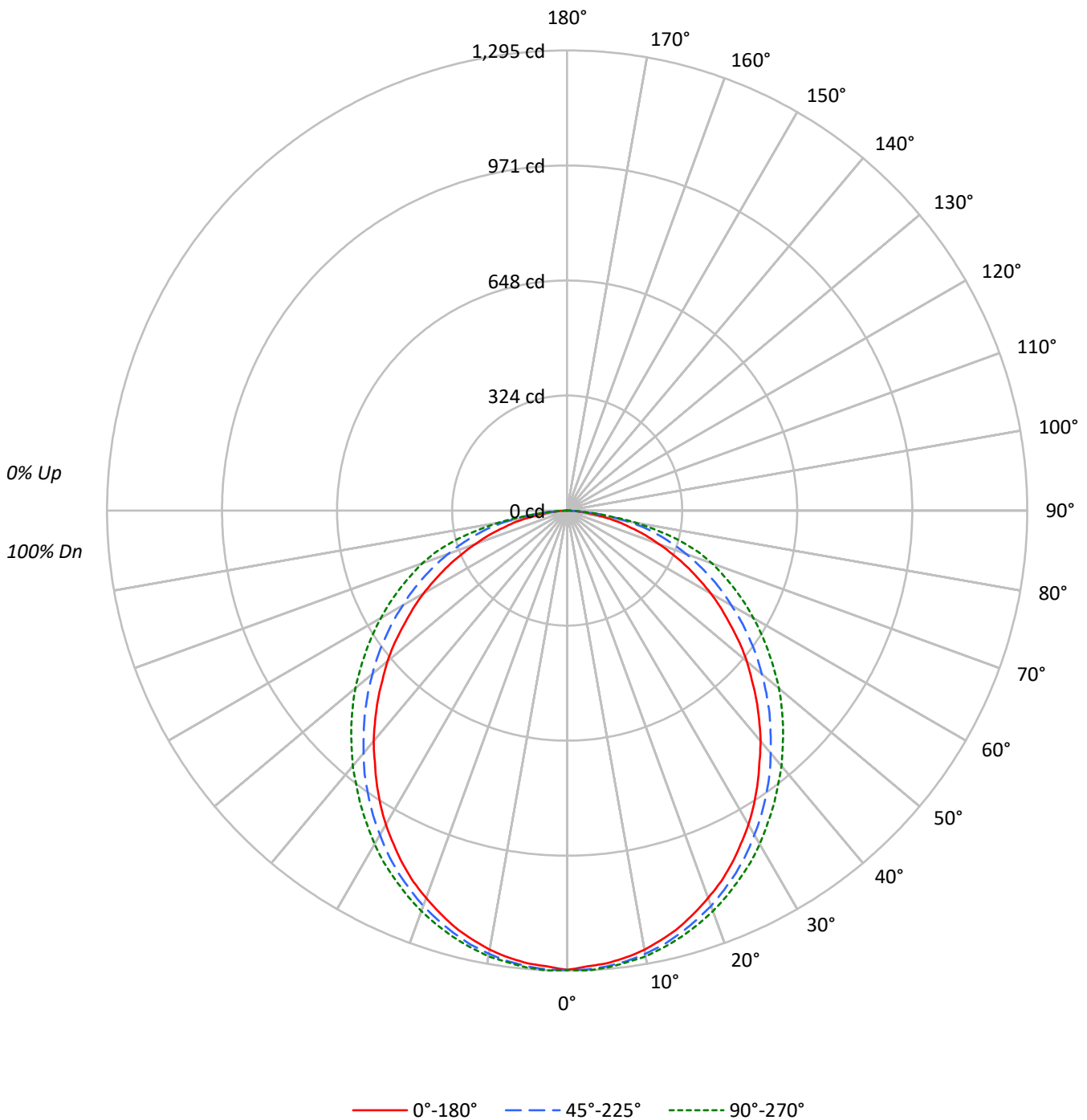
Lumens per Lamp: N/A
Luminaire Lumens: 3561.1 lumens
Efficiency: N/A
Efficacy: 146.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 24.3
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



TEST NUMBER: P474943
CATALOG NUMBER: 22CZ2-34HE-S-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474943

CATALOG NUMBER: 22CZ2-34HE-S-UNV-L840-CD1-U

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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3479	3479	3479
5°	3455	3478	3487
10°	3429	3462	3480
15°	3385	3431	3460
20°	3322	3391	3435
25°	3255	3339	3401
30°	3171	3275	3369
35°	3072	3208	3326
40°	2976	3130	3297
45°	2866	3063	3270
50°	2763	2995	3258
55°	2632	2936	3243
60°	2514	2876	3256
65°	2360	2842	3303
70°	2156	2807	3411
75°	1935	2786	3413
80°	1629	2631	3031
85°	1223	1782	1649



TEST NUMBER: P474943

CATALOG NUMBER: 22CZ2-34HE-S-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	3.4
10°-20°	346.7	9.7
20°-30°	517.0	14.5
30°-40°	610.0	17.1
40°-50°	621.5	17.5
50°-60°	560.5	15.7
60°-70°	440.2	12.4
70°-80°	275.2	7.7
80°-90°	67.8	1.9
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°	985.8	27.7
0°-40°	1595.8	44.8
0°-60°	2777.9	78.0
0°-90°	3561.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3561.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1293	1293	1293	1293	1293	
5°	1279	1282	1288	1290	1291	121
15°	1215	1219	1232	1240	1242	342
25°	1096	1102	1125	1141	1145	504
35°	935	948	976	1003	1013	585
45°	753	766	805	844	859	581
55°	561	579	626	674	691	503
65°	371	390	446	496	519	366
75°	186	212	268	314	328	199
85°	40	51	58	57	53	48
90°	0	0	0	0	0	



TEST NUMBER: P474943

CATALOG NUMBER: 22CZ2-34HE-S-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1292.7	1292.7	1292.7	1292.7	1292.7
2.5°	1284.1	1286.7	1292.7	1295.3	1295.3
5°	1278.9	1281.5	1287.5	1290.1	1291.0
7.5°	1268.6	1272.0	1278.9	1282.3	1282.3
10°	1254.8	1259.1	1266.8	1272.0	1273.7
12.5°	1235.8	1241.0	1251.3	1257.4	1259.1
15°	1215.1	1219.4	1231.5	1240.1	1241.8
17.5°	1188.4	1195.3	1208.2	1219.4	1222.0
20°	1160.0	1167.7	1184.1	1197.0	1199.6
22.5°	1130.7	1136.7	1154.8	1170.3	1173.8
25°	1096.2	1102.2	1124.6	1141.0	1145.3
27.5°	1058.3	1068.6	1091.0	1110.0	1116.9
30°	1020.4	1030.7	1054.0	1076.4	1084.1
32.5°	979.0	990.2	1016.9	1040.2	1047.9
35°	935.0	948.0	976.4	1003.1	1012.6
37.5°	889.4	904.0	935.9	964.3	974.7
40°	847.1	857.5	891.1	923.8	938.5
42.5°	799.7	813.5	847.1	884.2	898.0
45°	753.2	766.1	804.9	843.7	859.2
47.5°	704.9	721.3	760.1	803.2	818.7
50°	660.1	673.9	715.3	761.0	778.2
52.5°	611.9	626.5	671.3	718.7	734.2
55°	561.0	579.1	625.7	673.9	691.2
57.5°	514.5	531.7	580.8	630.8	648.9
60°	467.1	484.3	534.3	585.2	605.0
62.5°	417.1	436.9	491.2	540.3	562.7
65°	370.6	390.4	446.4	496.4	518.8
67.5°	321.4	344.7	400.7	453.3	475.7
70°	274.0	301.6	356.8	408.5	433.5
72.5°	231.8	254.2	312.0	366.3	386.9
75°	186.1	212.0	268.0	313.7	328.3
77.5°	147.4	169.8	223.2	253.4	262.8
80°	105.1	130.1	169.8	187.9	195.6
82.5°	69.8	90.5	115.5	118.9	117.2
85°	39.6	50.8	57.7	56.9	53.4
87.5°	15.5	17.2	12.9	7.8	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)