

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: P474944

Luminaire Tested: **22CZ2-39HE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474944
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39HE-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

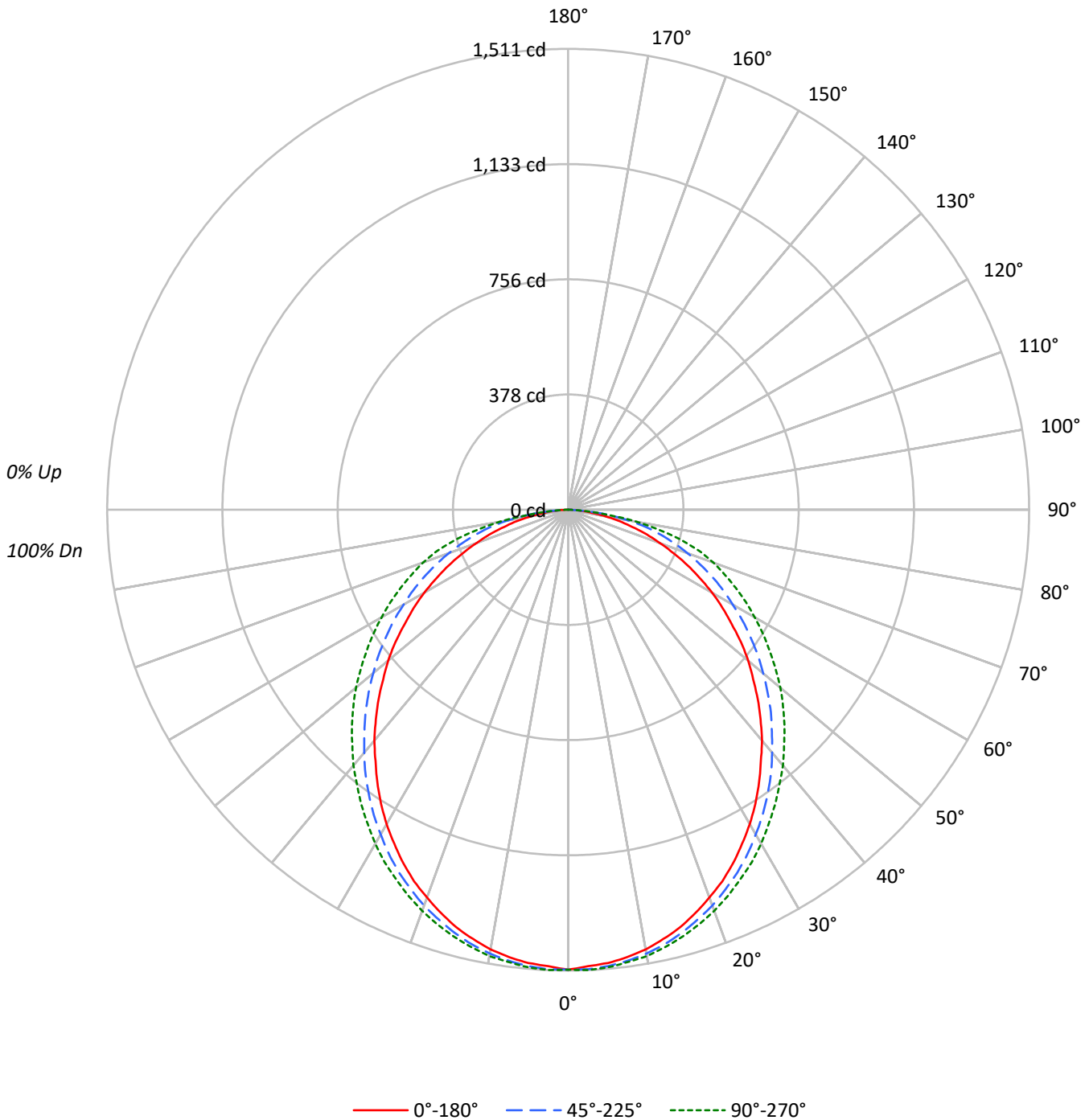
Lumens per Lamp: N/A
Luminaire Lumens: 4154.6 lumens
Efficiency: N/A
Efficacy: 145.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 28.5
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	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°	4058	4058	4058
5°	4030	4058	4068
10°	4000	4039	4060
15°	3949	4003	4036
20°	3875	3956	4008
25°	3797	3896	3967
30°	3699	3821	3930
35°	3584	3742	3881
40°	3472	3652	3846
45°	3344	3574	3815
50°	3224	3494	3801
55°	3071	3424	3783
60°	2933	3355	3799
65°	2753	3316	3854
70°	2515	3275	3979
75°	2258	3251	3983
80°	1901	3070	3536
85°	1426	2081	1924



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.4	3.4
10°-20°	404.5	9.7
20°-30°	603.1	14.5
30°-40°	711.7	17.1
40°-50°	725.1	17.5
50°-60°	653.9	15.7
60°-70°	513.6	12.4
70°-80°	321.1	7.7
80°-90°	79.1	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°	1150.1	27.7
0°-40°	1861.8	44.8
0°-60°	3240.8	78.0
0°-90°	4154.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4154.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1492	1495	1502	1505	1506	142
15°	1418	1423	1437	1447	1449	399
25°	1279	1286	1312	1331	1336	588
35°	1091	1106	1139	1170	1181	682
45°	879	894	939	984	1002	678
55°	654	676	730	786	806	587
65°	432	456	521	579	605	427
75°	217	247	313	366	383	232
85°	46	59	67	66	62	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1508.1	1508.1	1508.1	1508.1	1508.1
2.5°	1498.1	1501.1	1508.1	1511.1	1511.1
5°	1492.0	1495.1	1502.1	1505.1	1506.1
7.5°	1480.0	1484.0	1492.0	1496.1	1496.1
10°	1463.9	1468.9	1478.0	1484.0	1486.0
12.5°	1441.8	1447.8	1459.9	1466.9	1468.9
15°	1417.6	1422.7	1436.7	1446.8	1448.8
17.5°	1386.5	1394.5	1409.6	1422.7	1425.7
20°	1353.3	1362.3	1381.4	1396.5	1399.5
22.5°	1319.1	1326.2	1347.3	1365.4	1369.4
25°	1278.9	1285.9	1312.1	1331.2	1336.2
27.5°	1234.7	1246.7	1272.9	1295.0	1303.0
30°	1190.4	1202.5	1229.6	1255.8	1264.8
32.5°	1142.2	1155.2	1186.4	1213.5	1222.6
35°	1090.9	1106.0	1139.1	1170.3	1181.4
37.5°	1037.6	1054.7	1091.9	1125.1	1137.1
40°	988.3	1000.4	1039.6	1077.8	1094.9
42.5°	933.0	949.1	988.3	1031.6	1047.6
45°	878.7	893.8	939.1	984.3	1002.4
47.5°	822.4	841.5	886.8	937.1	955.2
50°	770.2	786.2	834.5	887.8	907.9
52.5°	713.8	730.9	783.2	838.5	856.6
55°	654.5	675.6	729.9	786.2	806.3
57.5°	600.2	620.3	677.7	736.0	757.1
60°	544.9	565.0	623.4	682.7	705.8
62.5°	486.6	509.7	573.1	630.4	656.5
65°	432.3	455.5	520.8	579.1	605.3
67.5°	375.0	402.2	467.5	528.9	555.0
70°	319.7	351.9	416.2	476.6	505.7
72.5°	270.5	296.6	364.0	427.3	451.4
75°	217.2	247.3	312.7	366.0	383.1
77.5°	171.9	198.1	260.4	295.6	306.7
80°	122.7	151.8	198.1	219.2	228.2
82.5°	81.4	105.6	134.7	138.7	136.7
85°	46.2	59.3	67.4	66.4	62.3
87.5°	18.1	20.1	15.1	9.0	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)