

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: P474942

Luminaire Tested: **22CZ2-29HE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474942  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29HE-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: 3099.6 lumens  
Efficiency: N/A  
Efficacy: 148.3 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

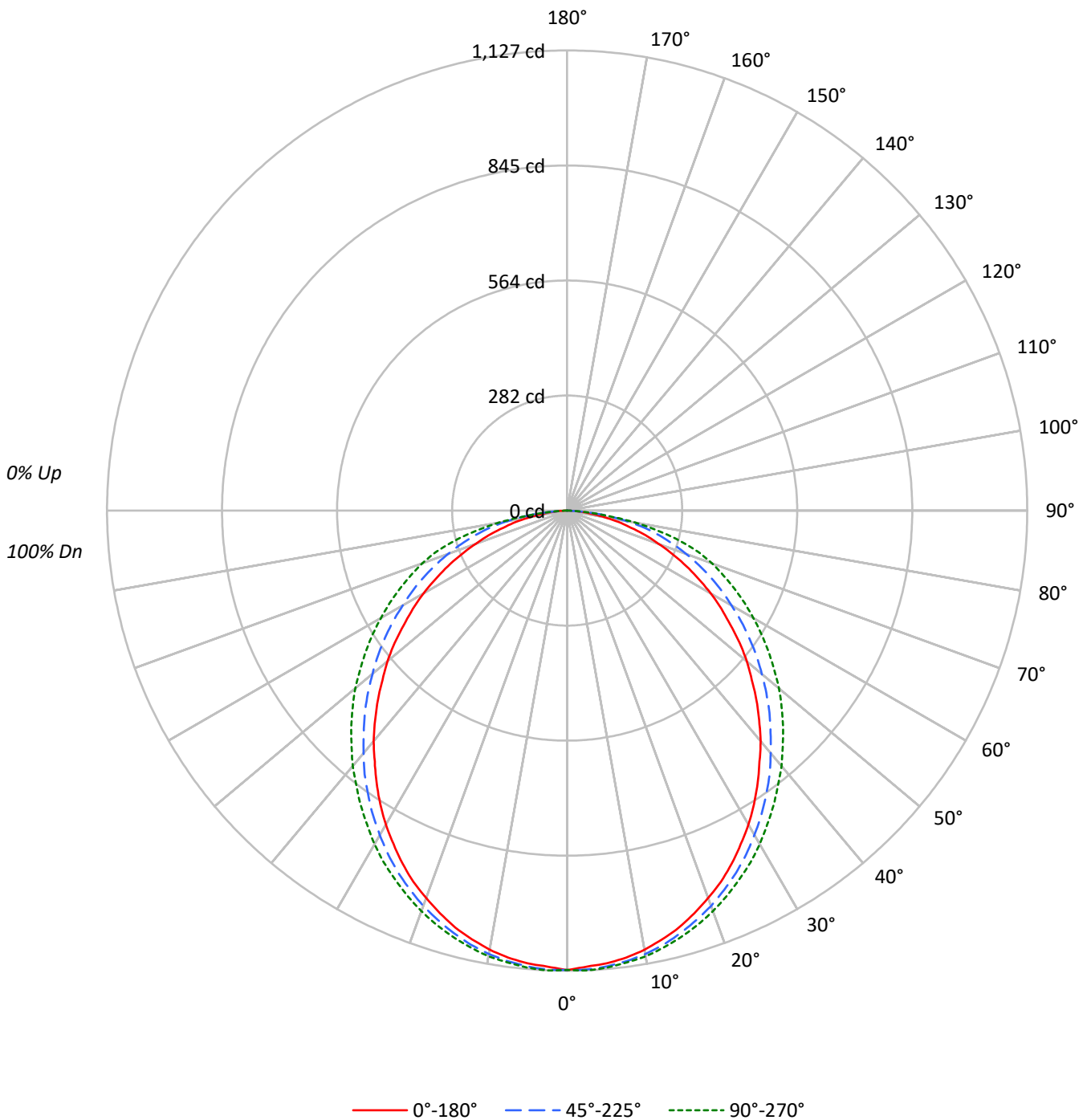
Input Watts (W): 20.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	85	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°	3028	3028	3028
5°	3007	3027	3035
10°	2984	3013	3030
15°	2946	2986	3011
20°	2891	2951	2990
25°	2833	2907	2960
30°	2760	2851	2932
35°	2674	2792	2895
40°	2590	2725	2870
45°	2495	2666	2846
50°	2406	2606	2835
55°	2291	2555	2822
60°	2188	2503	2834
65°	2053	2474	2876
70°	1876	2443	2969
75°	1684	2426	2972
80°	1418	2290	2639
85°	1065	1553	1436



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.3	3.4
10°-20°	301.8	9.7
20°-30°	450.0	14.5
30°-40°	531.0	17.1
40°-50°	541.0	17.5
50°-60°	487.9	15.7
60°-70°	383.2	12.4
70°-80°	239.5	7.7
80°-90°	59.1	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°	858.1	27.7
0°-40°	1389.0	44.8
0°-60°	2417.9	78.0
0°-90°	3099.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3099.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1113	1115	1121	1123	1124	106
15°	1058	1061	1072	1079	1081	298
25°	954	959	979	993	997	439
35°	814	825	850	873	881	509
45°	656	667	701	734	748	506
55°	488	504	545	587	602	438
65°	322	340	389	432	452	319
75°	162	184	233	273	286	173
85°	34	44	50	50	46	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1125.2	1125.2	1125.2	1125.2	1125.2
2.5°	1117.7	1119.9	1125.2	1127.4	1127.4
5°	1113.2	1115.4	1120.7	1122.9	1123.7
7.5°	1104.2	1107.2	1113.2	1116.2	1116.2
10°	1092.2	1095.9	1102.7	1107.2	1108.7
12.5°	1075.6	1080.2	1089.2	1094.4	1095.9
15°	1057.6	1061.4	1071.9	1079.4	1080.9
17.5°	1034.4	1040.4	1051.6	1061.4	1063.6
20°	1009.6	1016.4	1030.6	1041.9	1044.1
22.5°	984.1	989.4	1005.1	1018.6	1021.6
25°	954.1	959.4	978.9	993.1	996.9
27.5°	921.1	930.1	949.6	966.1	972.1
30°	888.1	897.1	917.4	936.9	943.6
32.5°	852.1	861.9	885.1	905.4	912.1
35°	813.9	825.1	849.9	873.1	881.4
37.5°	774.1	786.9	814.6	839.4	848.4
40°	737.4	746.4	775.6	804.1	816.9
42.5°	696.1	708.1	737.4	769.6	781.6
45°	655.6	666.8	700.6	734.4	747.9
47.5°	613.6	627.8	661.6	699.1	712.6
50°	574.6	586.6	622.6	662.3	677.3
52.5°	532.6	545.3	584.3	625.6	639.1
55°	488.3	504.1	544.6	586.6	601.6
57.5°	447.8	462.8	505.6	549.1	564.8
60°	406.6	421.6	465.1	509.3	526.6
62.5°	363.1	380.3	427.6	470.3	489.8
65°	322.5	339.8	388.6	432.1	451.6
67.5°	279.8	300.0	348.8	394.6	414.1
70°	238.5	262.5	310.5	355.5	377.3
72.5°	201.8	221.3	271.5	318.8	336.8
75°	162.0	184.5	233.3	273.0	285.8
77.5°	128.3	147.8	194.3	220.5	228.8
80°	91.5	113.3	147.8	163.5	170.3
82.5°	60.8	78.8	100.5	103.5	102.0
85°	34.5	44.3	50.3	49.5	46.5
87.5°	13.5	15.0	11.3	6.8	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)