

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: P294824

Luminaire Tested: **22CZ2-20HE-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P294824
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20HE-HRP-UNV-L935-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1391.4 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

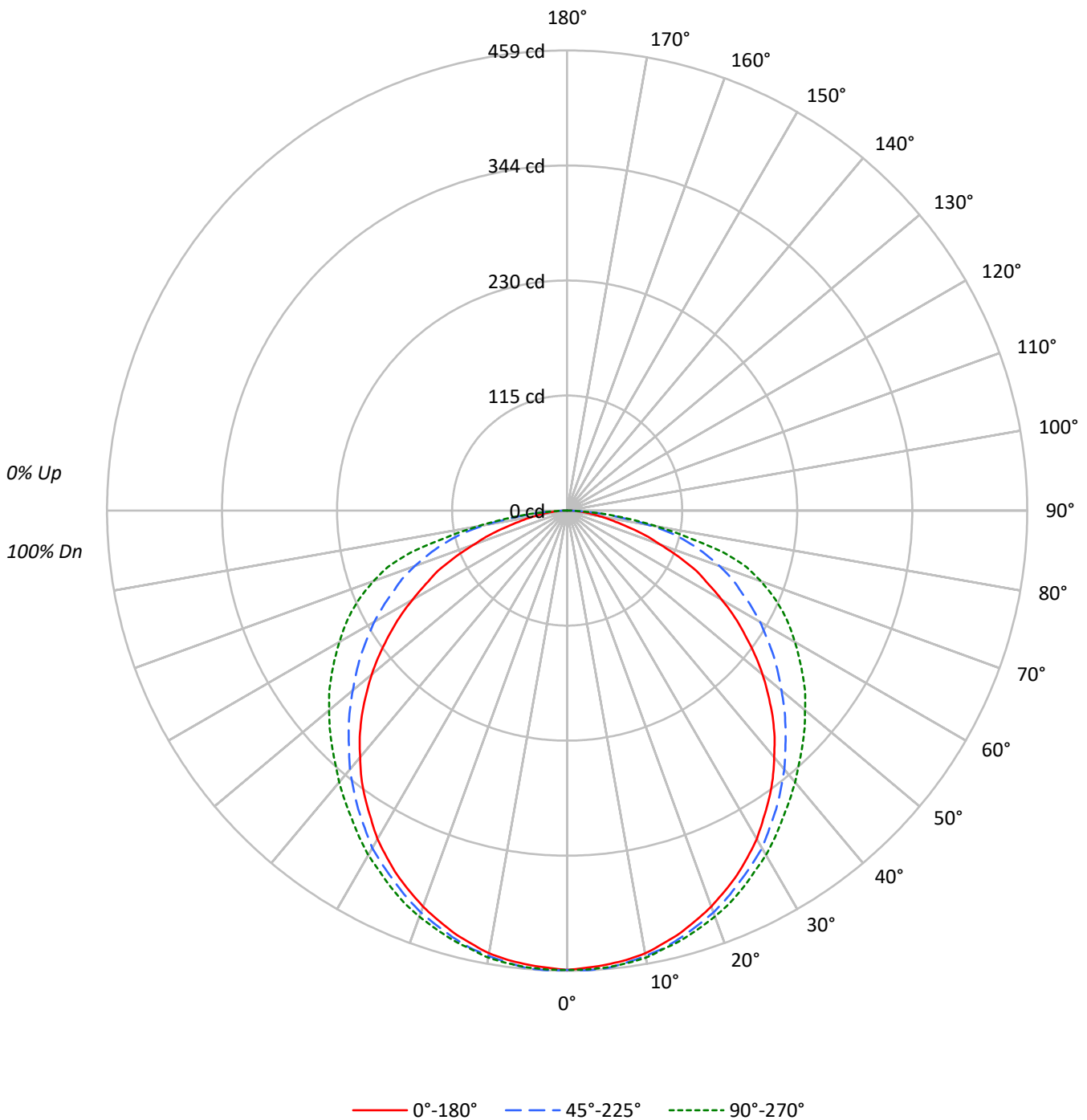
Input Watts (W): 16
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1233	1233	1233
5°	1228	1238	1235
10°	1226	1233	1238
15°	1215	1227	1235
20°	1204	1222	1234
25°	1191	1212	1233
30°	1175	1208	1233
35°	1153	1194	1231
40°	1128	1184	1242
45°	1102	1173	1263
50°	1065	1168	1297
55°	1017	1178	1346
60°	959	1195	1412
65°	905	1218	1509
70°	773	1271	1616
75°	648	1324	1679
80°	530	1278	1401
85°	460	948	1031



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	3.1
10°-20°	124.2	8.9
20°-30°	188.2	13.5
30°-40°	227.3	16.3
40°-50°	238.8	17.2
50°-60°	224.7	16.2
60°-70°	187.4	13.5
70°-80°	124.2	8.9
80°-90°	33.1	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°	355.9	25.6
0°-40°	583.2	41.9
0°-60°	1046.8	75.2
0°-90°	1391.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1391.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	458	458	458	458	458	
5°	455	456	458	458	457	43
15°	436	438	441	442	443	123
25°	401	404	408	413	415	185
35°	351	355	363	371	375	220
45°	290	294	308	324	332	223
55°	217	226	251	276	287	194
65°	142	154	191	223	237	138
75°	62	87	127	154	162	68
85°	15	23	31	33	33	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	458.2	458.2	458.2	458.2	458.2
2.5°	456.4	457.3	459.0	459.0	458.2
5°	454.7	455.5	458.2	458.2	457.3
7.5°	452.0	452.9	454.7	456.4	455.5
10°	448.5	449.4	451.1	452.9	452.9
12.5°	442.4	443.2	446.8	447.6	447.6
15°	436.2	438.0	440.6	442.4	443.2
17.5°	428.3	430.1	433.6	437.1	437.1
20°	420.4	422.2	426.6	430.1	431.0
22.5°	410.8	413.4	417.8	422.2	423.9
25°	401.1	403.7	408.1	413.4	415.2
27.5°	389.7	392.3	398.5	404.6	405.5
30°	378.3	380.9	388.8	394.1	396.7
32.5°	364.3	367.8	375.7	383.6	386.2
35°	351.1	354.6	363.4	371.3	374.8
37.5°	337.0	340.6	350.2	359.9	364.3
40°	321.2	325.6	337.0	347.6	353.7
42.5°	306.3	310.7	322.1	336.2	342.3
45°	289.6	294.0	308.1	323.9	331.8
47.5°	272.1	277.4	294.0	313.3	321.2
50°	254.5	260.7	279.1	301.1	309.8
52.5°	236.1	244.0	265.1	288.8	299.3
55°	216.8	226.5	251.0	276.5	287.0
57.5°	198.4	207.1	236.1	263.3	274.7
60°	178.2	189.6	222.1	250.1	262.4
62.5°	158.9	171.2	207.1	237.0	250.1
65°	142.2	154.5	191.3	222.9	237.0
67.5°	120.2	136.9	178.2	208.0	222.1
70°	98.3	121.1	161.5	192.2	205.4
72.5°	81.6	103.6	144.8	175.5	187.8
75°	62.3	86.9	127.3	153.6	161.5
77.5°	46.5	72.0	108.8	122.0	122.9
80°	34.2	55.3	82.5	86.9	90.4
82.5°	23.7	38.6	53.5	58.8	60.6
85°	14.9	22.8	30.7	33.4	33.4
87.5°	7.9	8.8	10.5	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)