

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: P274837

Luminaire Tested: **24CZ2-65-RDP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

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: P274837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65-RDP-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS WITH INSERT, 90CRI
Light Source: (112) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3776.0 lumens
Efficiency: N/A
Efficacy: 60.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

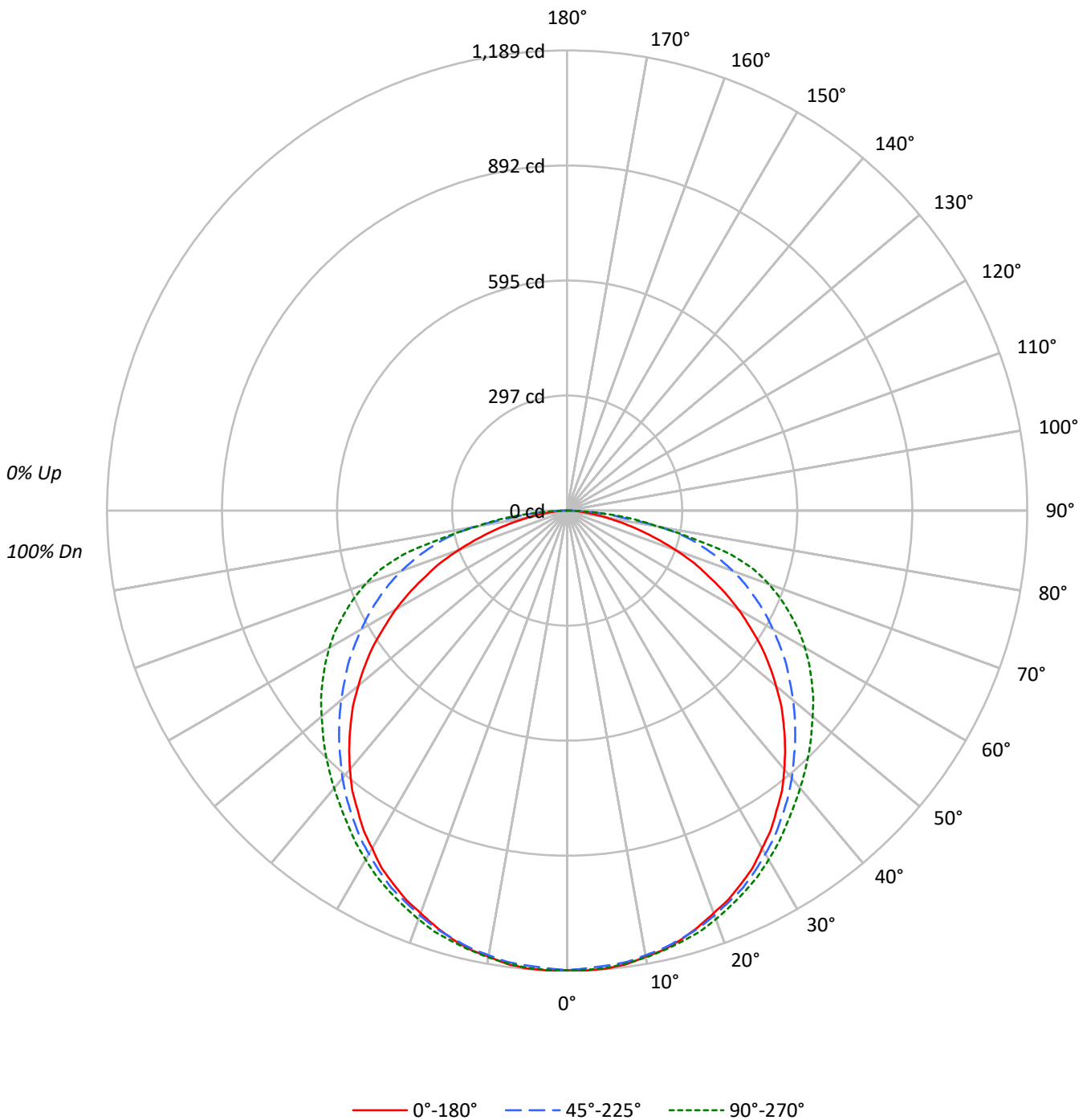
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1598	1598	1598
5°	1604	1594	1601
10°	1599	1594	1602
15°	1597	1594	1605
20°	1585	1593	1609
25°	1579	1596	1613
30°	1565	1592	1618
35°	1551	1587	1624
40°	1533	1586	1645
45°	1508	1586	1682
50°	1474	1596	1733
55°	1437	1621	1810
60°	1376	1653	1910
65°	1288	1711	2027
70°	1172	1790	2181
75°	993	1889	2279
80°	783	1901	1843
85°	579	1445	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.6	3.0
10°-20°	324.2	8.6
20°-30°	495.7	13.1
30°-40°	606.0	16.0
40°-50°	645.9	17.1
50°-60°	617.6	16.4
60°-70°	523.2	13.9
70°-80°	351.6	9.3
80°-90°	99.2	2.6
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°	932.6	24.7
0°-40°	1538.6	40.7
0°-60°	2802.1	74.2
0°-90°	3776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3776.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1187	1186	1180	1186	1186	113
15°	1146	1146	1144	1154	1152	323
25°	1064	1068	1075	1084	1086	490
35°	944	952	966	985	989	591
45°	792	805	834	869	884	611
55°	612	635	691	745	772	545
65°	405	446	538	609	637	402
75°	191	260	363	425	438	205
85°	38	77	94	101	105	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.4	1187.4	1187.4	1187.4	1187.4
2.5°	1189.3	1189.3	1183.7	1187.4	1187.4
5°	1187.4	1185.6	1180.0	1185.6	1185.6
7.5°	1181.8	1180.0	1176.2	1181.8	1180.0
10°	1170.6	1170.6	1166.8	1172.5	1172.5
12.5°	1161.2	1159.4	1157.5	1165.0	1163.1
15°	1146.2	1146.2	1144.4	1153.7	1151.9
17.5°	1127.5	1129.4	1131.3	1138.7	1140.6
20°	1106.9	1110.7	1112.5	1123.8	1123.8
22.5°	1088.2	1090.1	1093.8	1105.0	1105.0
25°	1063.8	1067.6	1075.1	1084.4	1086.3
27.5°	1039.5	1041.4	1050.7	1063.8	1065.7
30°	1007.6	1013.3	1024.5	1039.5	1041.4
32.5°	979.5	985.2	998.3	1013.3	1017.0
35°	944.0	951.5	966.4	985.2	988.9
37.5°	912.1	917.7	936.5	957.1	962.7
40°	872.8	884.0	902.8	927.1	936.5
42.5°	833.5	844.7	867.2	899.0	910.2
45°	792.3	805.4	833.5	869.0	884.0
47.5°	751.0	766.0	797.9	839.1	855.9
50°	704.2	723.0	762.3	809.1	827.8
52.5°	659.3	681.8	724.8	777.3	801.6
55°	612.5	634.9	691.1	745.4	771.7
57.5°	560.0	590.0	651.8	713.6	741.7
60°	511.3	539.4	614.3	681.8	709.8
62.5°	458.9	496.3	576.9	648.0	676.1
65°	404.6	445.8	537.5	608.7	636.8
67.5°	355.9	400.8	498.2	569.4	597.5
70°	297.8	354.0	455.1	526.3	554.4
72.5°	243.5	305.3	410.2	479.5	505.7
75°	191.0	260.3	363.4	425.2	438.3
77.5°	142.3	215.4	314.7	340.9	331.5
80°	101.1	172.3	245.4	232.2	237.9
82.5°	65.6	131.1	151.7	172.3	177.9
85°	37.5	76.8	93.6	101.1	104.9
87.5°	16.9	28.1	37.5	37.5	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)