

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: FAIL-SAFE

Report Number: P313928

Luminaire Tested: **24FCZ2-40-UNV-L83050-CP125-W2A-U-4500K**

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: P313928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L83050-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3833.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

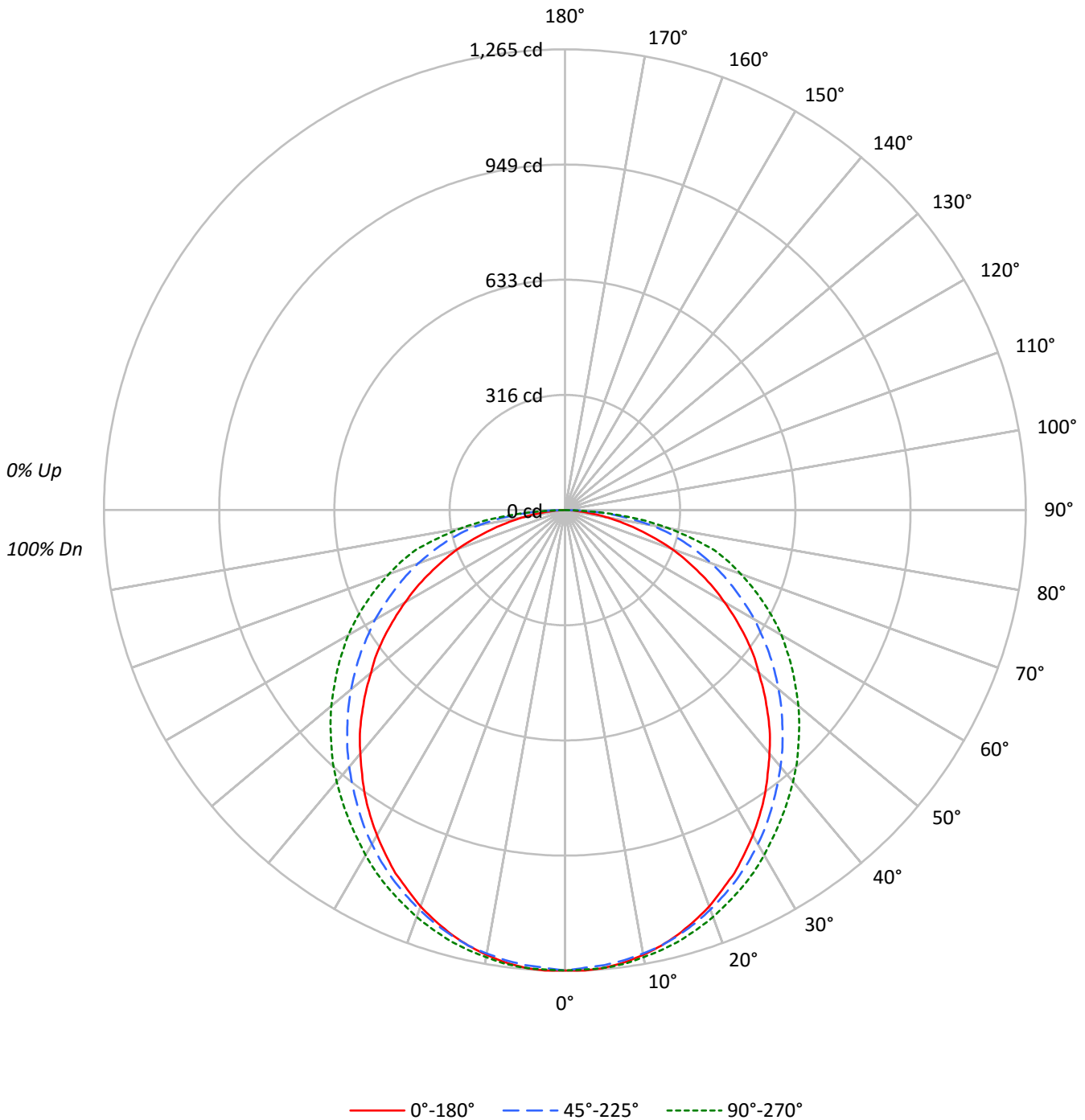
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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°	1701	1701	1701
5°	1704	1694	1704
10°	1694	1689	1703
15°	1679	1683	1704
20°	1659	1672	1703
25°	1633	1659	1701
30°	1602	1646	1699
35°	1571	1629	1700
40°	1535	1617	1711
45°	1498	1607	1725
50°	1454	1603	1752
55°	1417	1605	1787
60°	1362	1619	1848
65°	1300	1636	1915
70°	1231	1686	2021
75°	1097	1759	2208
80°	936	1863	2256
85°	667	1845	2160



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	3.1
10°-20°	342.1	8.9
20°-30°	516.7	13.5
30°-40°	622.7	16.2
40°-50°	653.7	17.1
50°-60°	611.6	16.0
60°-70°	505.1	13.2
70°-80°	344.2	9.0
80°-90°	117.4	3.1
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°	978.4	25.5
0°-40°	1601.1	41.8
0°-60°	2866.4	74.8
0°-90°	3833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1262	1260	1254	1262	1262	120
15°	1206	1207	1208	1221	1223	340
25°	1100	1105	1118	1140	1146	506
35°	956	966	992	1025	1035	598
45°	787	804	844	890	907	607
55°	604	628	684	740	762	539
65°	408	443	514	579	602	405
75°	211	259	338	402	425	225
85°	43	85	120	135	140	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1264.1	1264.1	1264.1	1264.1	1264.1
2.5°	1265.4	1264.1	1257.7	1264.1	1262.8
5°	1261.5	1260.3	1253.9	1261.5	1261.5
7.5°	1252.6	1252.6	1246.3	1255.2	1256.5
10°	1239.9	1239.9	1236.1	1246.3	1246.3
12.5°	1224.7	1224.7	1224.7	1234.8	1236.1
15°	1205.6	1206.9	1208.1	1220.9	1223.4
17.5°	1182.7	1185.2	1189.1	1204.3	1206.9
20°	1158.5	1161.1	1167.4	1185.2	1189.1
22.5°	1128.0	1134.4	1143.3	1163.6	1167.4
25°	1100.0	1105.1	1117.8	1139.5	1145.8
27.5°	1065.7	1073.3	1089.9	1112.8	1121.7
30°	1031.4	1039.0	1059.3	1086.0	1093.7
32.5°	994.5	1005.9	1027.6	1055.5	1064.4
35°	956.3	966.5	991.9	1025.0	1035.2
37.5°	914.4	928.4	956.3	991.9	1004.7
40°	873.7	888.9	920.7	958.9	974.1
42.5°	833.0	848.2	883.8	927.1	942.3
45°	787.2	803.7	844.4	890.2	906.7
47.5°	741.4	761.8	806.3	854.6	872.4
50°	694.4	717.3	765.6	816.4	836.8
52.5°	652.4	674.0	724.9	779.6	798.6
55°	604.1	628.2	684.2	740.1	761.8
57.5°	554.5	581.2	640.9	702.0	723.6
60°	506.1	535.4	601.5	662.6	686.7
62.5°	459.1	488.3	557.0	620.6	644.8
65°	408.2	442.6	513.8	578.6	601.5
67.5°	359.9	396.8	471.8	535.4	558.3
70°	312.8	348.5	428.6	490.9	513.8
72.5°	262.0	302.7	382.8	447.6	471.8
75°	211.1	259.4	338.3	401.9	424.8
77.5°	164.1	213.6	292.5	344.6	356.1
80°	120.8	171.7	240.4	277.2	291.2
82.5°	77.6	128.4	183.1	209.8	221.3
85°	43.2	85.2	119.5	134.8	139.9
87.5°	17.8	36.9	48.3	54.7	54.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)