

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: P314242

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4000K**

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: P314242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3588.0 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

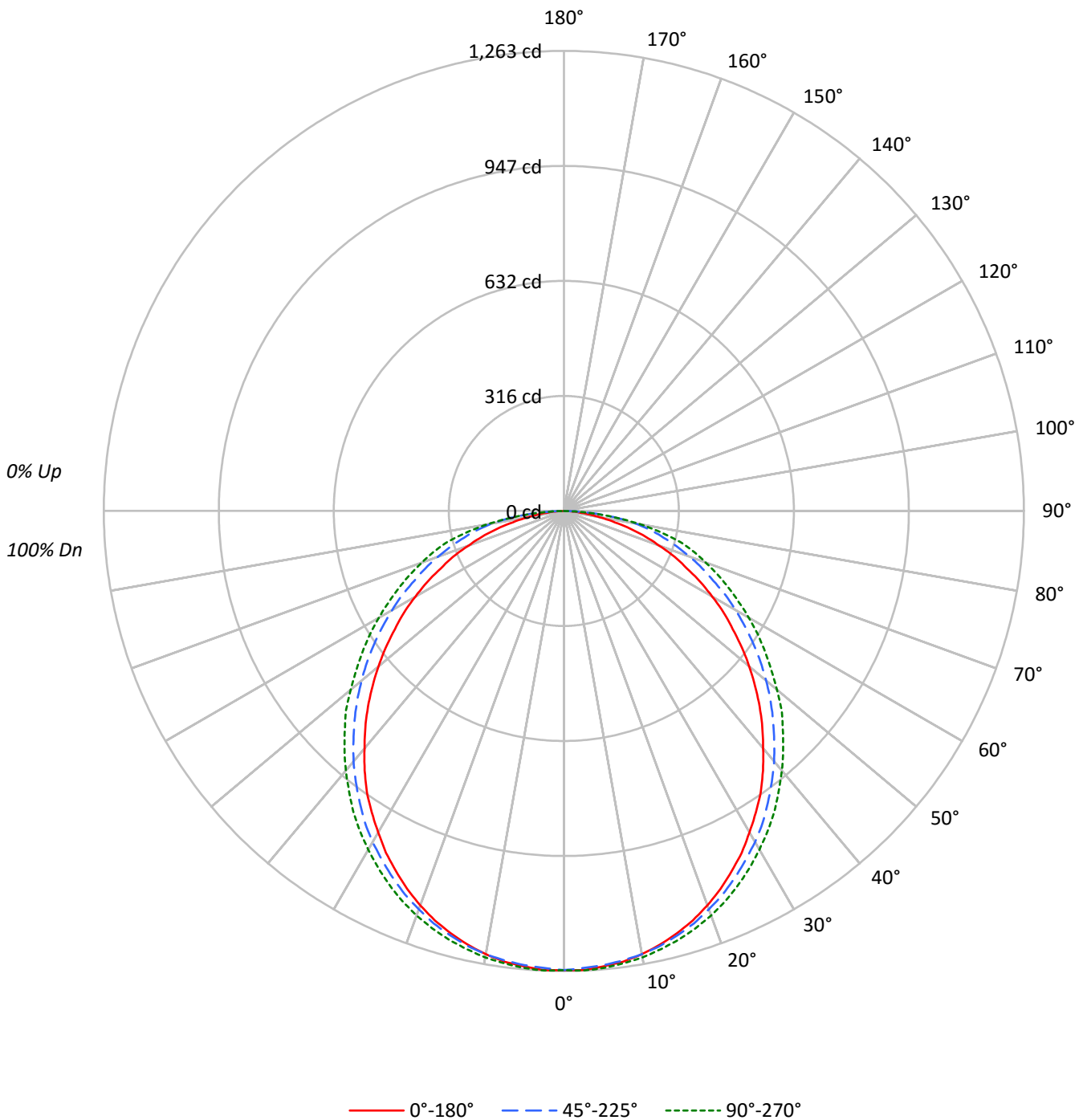
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1696	1696	1696
5°	1695	1690	1701
10°	1688	1688	1700
15°	1672	1680	1697
20°	1650	1666	1692
25°	1619	1650	1682
30°	1583	1631	1668
35°	1548	1604	1655
40°	1495	1577	1635
45°	1447	1546	1618
50°	1391	1517	1598
55°	1329	1489	1583
60°	1267	1466	1579
65°	1187	1441	1589
70°	1098	1448	1632
75°	984	1475	1724
80°	795	1563	1687
85°	597	1372	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.3	3.3
10°-20°	341.0	9.5
20°-30°	512.6	14.3
30°-40°	610.5	17.0
40°-50°	624.9	17.4
50°-60°	562.6	15.7
60°-70°	441.8	12.3
70°-80°	286.7	8.0
80°-90°	88.7	2.5
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°	972.9	27.1
0°-40°	1583.4	44.1
0°-60°	2770.8	77.2
0°-90°	3588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1255	1257	1251	1258	1259	119
15°	1200	1204	1206	1216	1218	338
25°	1091	1100	1111	1129	1133	502
35°	942	954	977	1001	1008	588
45°	760	778	813	843	850	586
55°	566	592	635	668	675	508
65°	373	401	452	490	499	371
75°	189	226	284	322	332	200
85°	39	72	89	87	87	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.5	1260.5	1260.5	1260.5	1260.5
2.5°	1261.6	1261.6	1255.9	1261.6	1262.8
5°	1254.8	1257.1	1251.4	1258.2	1259.3
7.5°	1248.0	1248.0	1244.5	1251.4	1252.5
10°	1235.4	1236.6	1235.4	1243.4	1244.5
12.5°	1219.5	1221.7	1222.9	1230.9	1232.0
15°	1200.1	1203.5	1205.8	1216.0	1218.3
17.5°	1178.4	1181.8	1187.5	1198.9	1201.2
20°	1152.2	1156.8	1163.6	1178.4	1181.8
22.5°	1123.7	1128.3	1139.7	1153.4	1159.1
25°	1090.7	1099.8	1111.2	1129.4	1132.8
27.5°	1057.6	1065.6	1080.4	1099.8	1104.4
30°	1018.9	1031.4	1049.6	1069.0	1073.6
32.5°	981.3	993.8	1015.5	1036.0	1041.7
35°	942.5	953.9	976.7	1000.6	1007.5
37.5°	898.1	912.9	938.0	961.9	968.7
40°	851.3	869.6	898.1	923.1	931.1
42.5°	806.9	826.3	854.8	882.1	891.2
45°	760.2	778.4	812.6	843.4	850.2
47.5°	712.3	732.8	769.3	800.1	811.5
50°	664.4	686.1	724.8	756.7	763.6
52.5°	616.6	639.4	680.4	714.6	718.0
55°	566.4	591.5	634.8	667.9	674.7
57.5°	520.8	542.5	589.2	623.4	631.4
60°	470.7	494.6	544.8	576.7	586.9
62.5°	422.8	447.9	500.3	532.2	541.3
65°	372.7	401.2	452.5	490.1	499.2
67.5°	329.4	356.7	411.4	447.9	457.0
70°	279.2	310.0	368.1	405.7	414.8
72.5°	235.9	267.8	325.9	362.4	376.1
75°	189.2	225.7	283.8	322.5	331.6
77.5°	143.6	185.8	245.0	274.7	274.7
80°	102.6	147.0	201.7	215.4	217.7
82.5°	67.2	110.5	149.3	148.2	148.2
85°	38.7	71.8	88.9	86.6	86.6
87.5°	14.8	29.6	31.9	31.9	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)