

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: P314225

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-S-CP125-W2A-U-3000K**

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: P314225
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: 24FCZ2-35HE-UNV-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3121.0 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

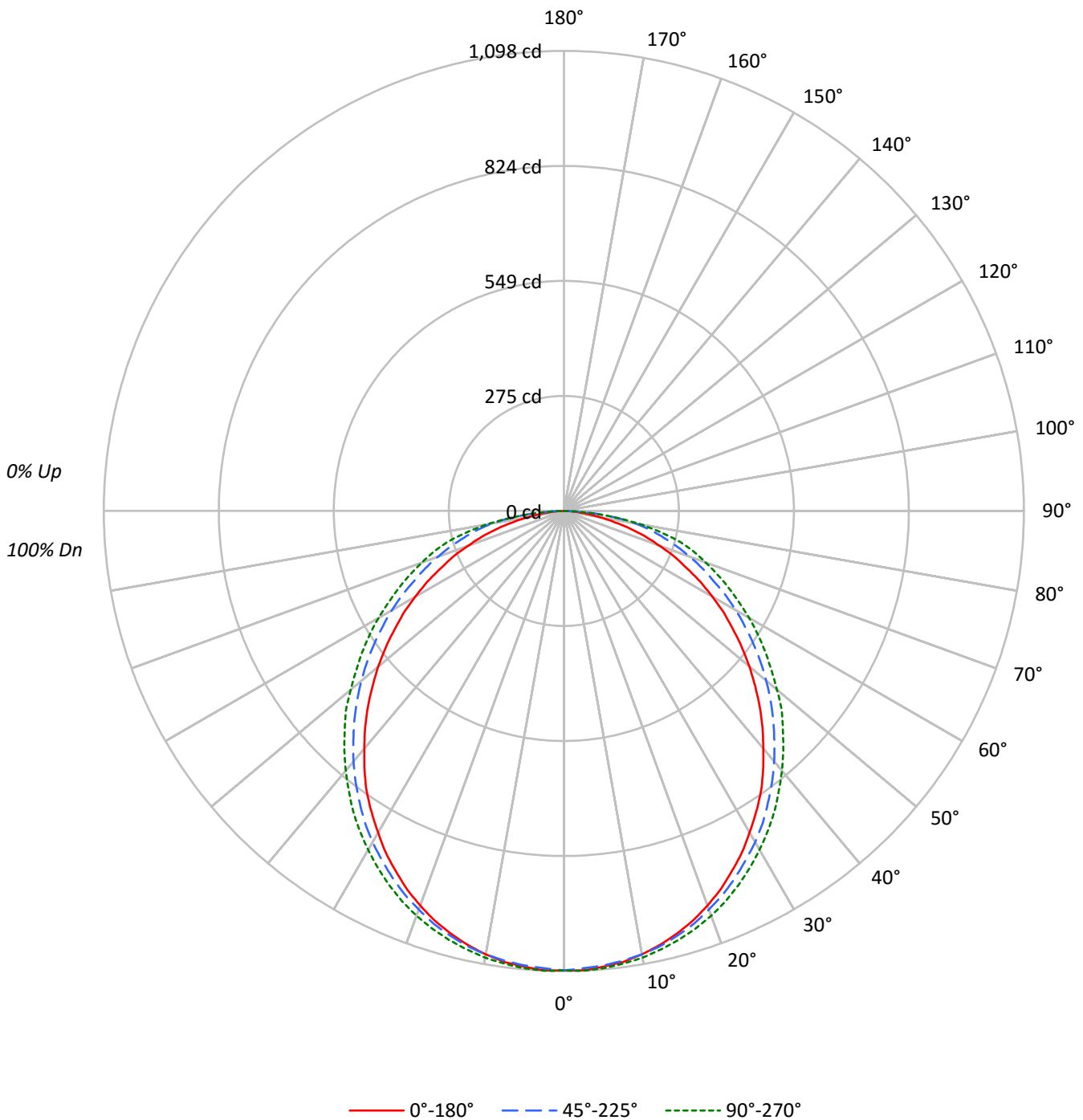
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1475	1475	1475
5°	1474	1470	1479
10°	1468	1468	1479
15°	1454	1461	1476
20°	1435	1449	1472
25°	1408	1435	1463
30°	1377	1418	1451
35°	1347	1396	1439
40°	1301	1372	1423
45°	1258	1345	1407
50°	1210	1320	1390
55°	1156	1295	1377
60°	1102	1275	1374
65°	1032	1253	1382
70°	956	1260	1419
75°	856	1283	1500
80°	691	1360	1467
85°	520	1193	1162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.8	3.3
10°-20°	296.6	9.5
20°-30°	445.8	14.3
30°-40°	531.1	17.0
40°-50°	543.5	17.4
50°-60°	489.3	15.7
60°-70°	384.3	12.3
70°-80°	249.4	8.0
80°-90°	77.2	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°	846.2	27.1
0°-40°	1377.3	44.1
0°-60°	2410.2	77.2
0°-90°	3121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1092	1094	1088	1094	1095	104
15°	1044	1047	1049	1058	1060	294
25°	949	957	967	982	985	437
35°	820	830	850	870	876	511
45°	661	677	707	734	740	510
55°	493	514	552	581	587	442
65°	324	349	394	426	434	323
75°	165	196	247	281	288	174
85°	34	62	77	75	75	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1096.4	1096.4	1096.4	1096.4	1096.4
2.5°	1097.4	1097.4	1092.5	1097.4	1098.4
5°	1091.5	1093.5	1088.5	1094.4	1095.4
7.5°	1085.5	1085.5	1082.5	1088.5	1089.5
10°	1074.6	1075.6	1074.6	1081.6	1082.5
12.5°	1060.7	1062.7	1063.7	1070.7	1071.6
15°	1043.9	1046.9	1048.8	1057.8	1059.7
17.5°	1025.1	1028.0	1033.0	1042.9	1044.9
20°	1002.2	1006.2	1012.2	1025.1	1028.0
22.5°	977.5	981.4	991.3	1003.2	1008.2
25°	948.7	956.6	966.6	982.4	985.4
27.5°	920.0	926.9	939.8	956.6	960.6
30°	886.3	897.2	913.0	929.9	933.8
32.5°	853.5	864.5	883.3	901.1	906.1
35°	819.8	829.8	849.6	870.4	876.3
37.5°	781.2	794.1	815.9	836.7	842.6
40°	740.5	756.4	781.2	803.0	809.9
42.5°	701.9	718.7	743.5	767.3	775.2
45°	661.2	677.1	706.8	733.6	739.5
47.5°	619.6	637.4	669.2	695.9	705.8
50°	578.0	596.8	630.5	658.3	664.2
52.5°	536.3	556.1	591.8	621.6	624.5
55°	492.7	514.5	552.2	580.9	586.9
57.5°	453.0	471.9	512.5	542.3	549.2
60°	409.4	430.2	473.9	501.6	510.5
62.5°	367.8	389.6	435.2	463.0	470.9
65°	324.2	349.0	393.6	426.3	434.2
67.5°	286.5	310.3	357.9	389.6	397.5
70°	242.9	269.6	320.2	352.9	360.8
72.5°	205.2	233.0	283.5	315.2	327.1
75°	164.6	196.3	246.8	280.6	288.5
77.5°	124.9	161.6	213.1	238.9	238.9
80°	89.2	127.9	175.5	187.4	189.3
82.5°	58.5	96.2	129.9	128.9	128.9
85°	33.7	62.5	77.3	75.3	75.3
87.5°	12.9	25.8	27.8	27.8	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)