

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: P311318

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311318
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-L82765-S-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 3064.0 lumens
Efficiency: N/A
Efficacy: 109.4 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

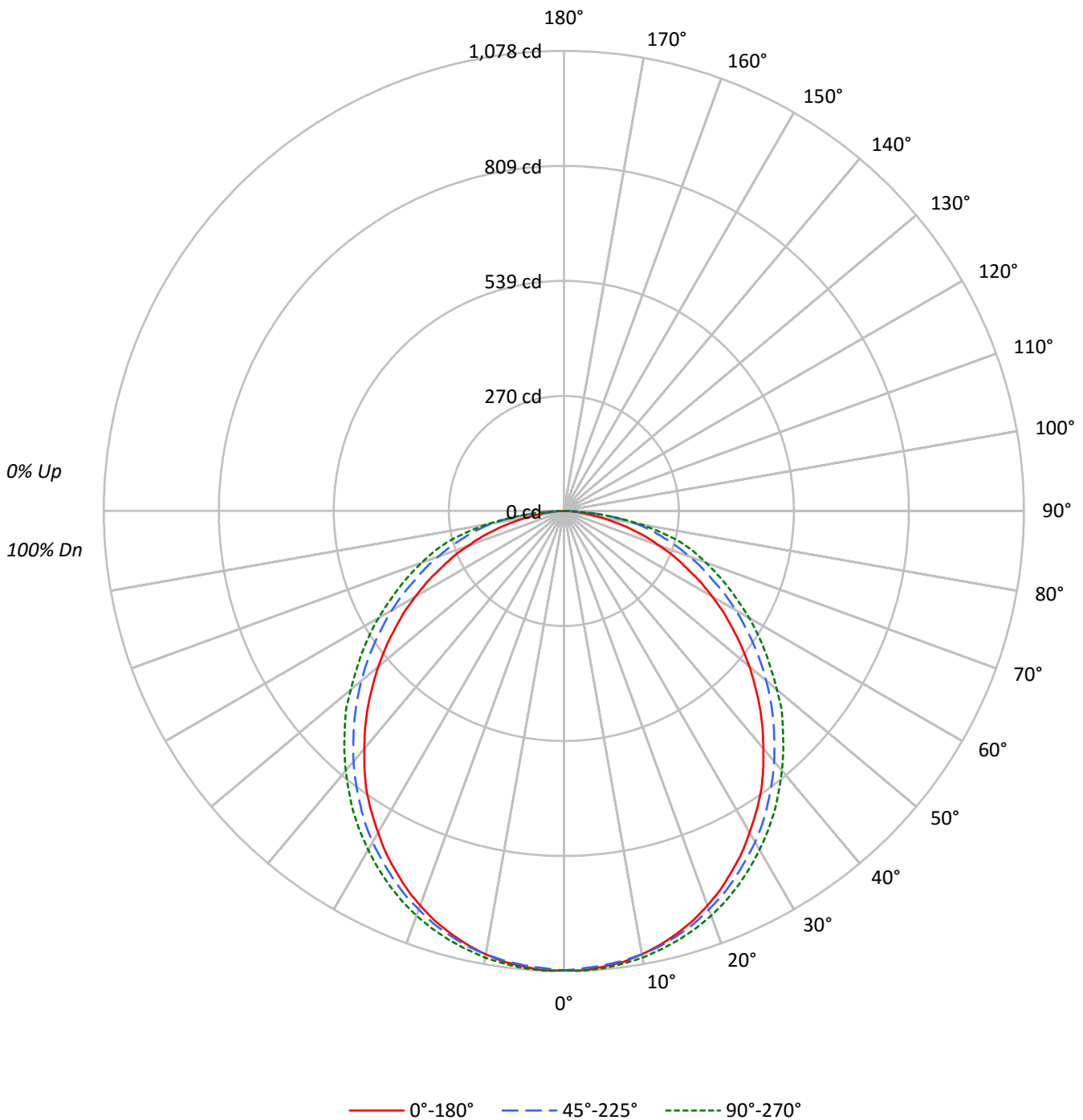
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1448	1448	1448
5°	1447	1443	1452
10°	1441	1441	1452
15°	1427	1434	1449
20°	1409	1423	1445
25°	1383	1409	1436
30°	1352	1393	1424
35°	1322	1370	1413
40°	1277	1347	1397
45°	1235	1320	1381
50°	1188	1296	1365
55°	1135	1272	1352
60°	1082	1252	1349
65°	1013	1230	1357
70°	938	1237	1394
75°	840	1260	1472
80°	679	1335	1440
85°	511	1172	1142



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	3.3
10°-20°	291.2	9.5
20°-30°	437.7	14.3
30°-40°	521.4	17.0
40°-50°	533.6	17.4
50°-60°	480.4	15.7
60°-70°	377.3	12.3
70°-80°	244.8	8.0
80°-90°	75.7	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°	830.8	27.1
0°-40°	1352.2	44.1
0°-60°	2366.2	77.2
0°-90°	3064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1072	1074	1069	1074	1075	102
15°	1025	1028	1030	1038	1040	289
25°	931	939	949	964	967	429
35°	805	815	834	854	860	502
45°	649	665	694	720	726	500
55°	484	505	542	570	576	434
65°	318	343	386	418	426	317
75°	162	193	242	275	283	171
85°	33	61	76	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1076.4	1076.4	1076.4	1076.4	1076.4
2.5°	1077.4	1077.4	1072.5	1077.4	1078.3
5°	1071.5	1073.5	1068.6	1074.5	1075.4
7.5°	1065.7	1065.7	1062.8	1068.6	1069.6
10°	1055.0	1056.0	1055.0	1061.8	1062.8
12.5°	1041.4	1043.3	1044.3	1051.1	1052.1
15°	1024.8	1027.7	1029.7	1038.4	1040.4
17.5°	1006.3	1009.2	1014.1	1023.8	1025.8
20°	983.9	987.8	993.7	1006.3	1009.2
22.5°	959.6	963.5	973.2	984.9	989.8
25°	931.4	939.2	948.9	964.5	967.4
27.5°	903.2	910.0	922.6	939.2	943.1
30°	870.1	880.8	896.4	912.9	916.8
32.5°	838.0	848.7	867.2	884.7	889.5
35°	804.9	814.6	834.1	854.5	860.3
37.5°	766.9	779.6	801.0	821.4	827.3
40°	727.0	742.6	766.9	788.3	795.1
42.5°	689.1	705.6	729.9	753.3	761.1
45°	649.2	664.7	693.9	720.2	726.0
47.5°	608.3	625.8	656.9	683.2	692.9
50°	567.4	585.9	619.0	646.2	652.1
52.5°	526.5	546.0	581.0	610.2	613.1
55°	483.7	505.1	542.1	570.3	576.2
57.5°	444.8	463.3	503.2	532.4	539.2
60°	401.9	422.4	465.2	492.5	501.2
62.5°	361.1	382.5	427.3	454.5	462.3
65°	318.2	342.6	386.4	418.5	426.3
67.5°	281.3	304.6	351.3	382.5	390.3
70°	238.4	264.7	314.4	346.5	354.3
72.5°	201.5	228.7	278.3	309.5	321.2
75°	161.6	192.7	242.3	275.4	283.2
77.5°	122.6	158.6	209.2	234.6	234.6
80°	87.6	125.5	172.3	183.9	185.9
82.5°	57.4	94.4	127.5	126.5	126.5
85°	33.1	61.3	75.9	74.0	74.0
87.5°	12.7	25.3	27.3	27.3	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)