

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: P311341

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP250-W2A-U-5000K**

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: P311341
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 3265.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

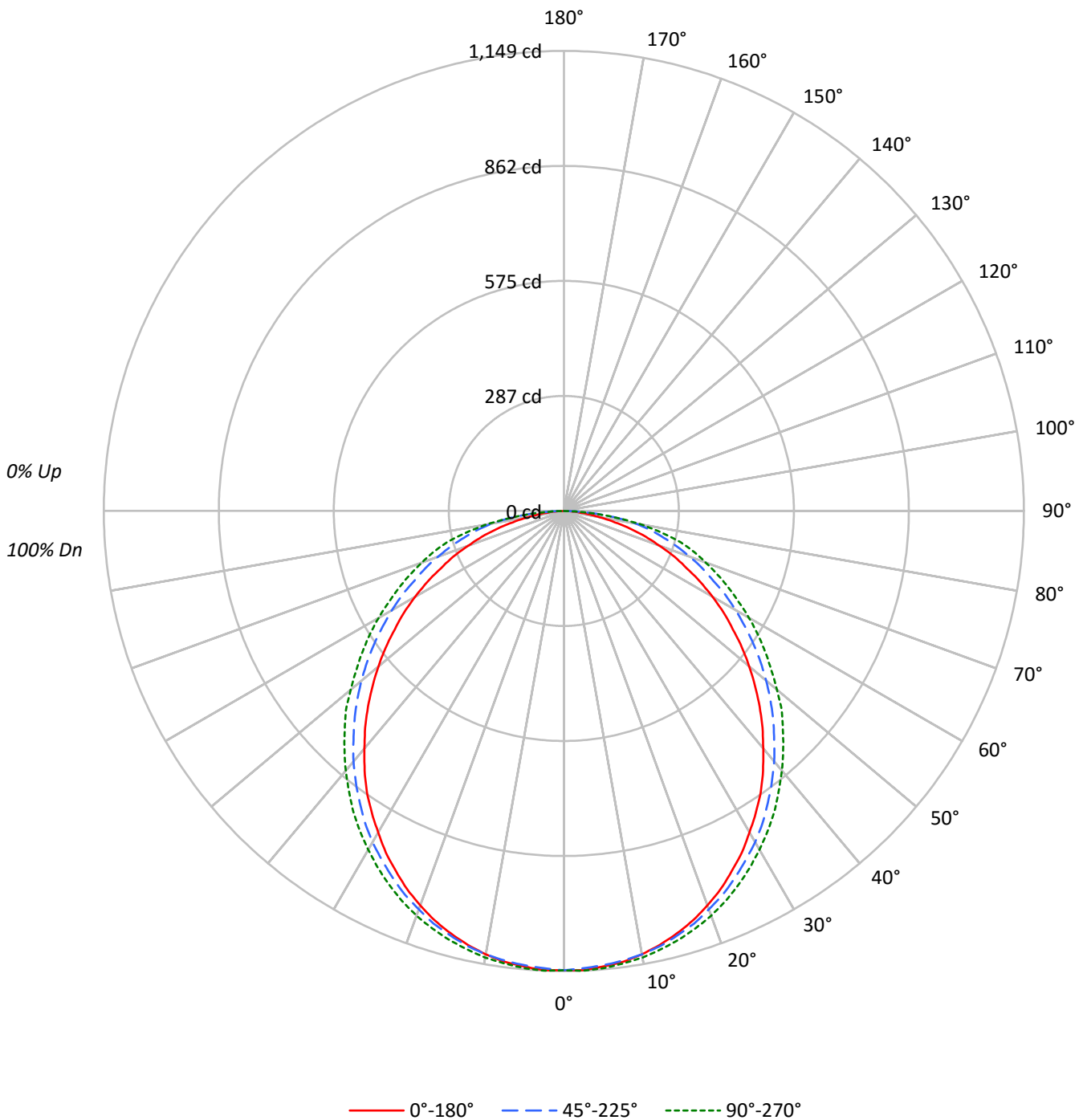
Input Watts (W): 28.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1543	1543	1543
5°	1542	1538	1548
10°	1536	1536	1547
15°	1521	1528	1544
20°	1501	1516	1540
25°	1473	1501	1530
30°	1441	1484	1518
35°	1409	1460	1506
40°	1361	1435	1488
45°	1316	1407	1472
50°	1266	1381	1454
55°	1209	1355	1440
60°	1153	1334	1437
65°	1080	1311	1446
70°	1000	1318	1485
75°	895	1342	1569
80°	723	1423	1535
85°	545	1249	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.6	3.3
10°-20°	310.3	9.5
20°-30°	466.4	14.3
30°-40°	555.6	17.0
40°-50°	568.6	17.4
50°-60°	511.9	15.7
60°-70°	402.0	12.3
70°-80°	260.9	8.0
80°-90°	80.7	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°	885.3	27.1
0°-40°	1440.9	44.1
0°-60°	2521.4	77.2
0°-90°	3265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1147	1147	1147	1147	1147	
5°	1142	1144	1139	1145	1146	108
15°	1092	1095	1097	1107	1109	308
25°	992	1001	1011	1028	1031	457
35°	858	868	889	911	917	535
45°	692	708	739	767	774	533
55°	515	538	578	608	614	462
65°	339	365	412	446	454	338
75°	172	205	258	294	302	182
85°	35	65	81	79	79	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1147.0	1147.0	1147.0	1147.0	1147.0
2.5°	1148.1	1148.1	1142.9	1148.1	1149.1
5°	1141.8	1143.9	1138.7	1144.9	1146.0
7.5°	1135.6	1135.6	1132.5	1138.7	1139.8
10°	1124.2	1125.2	1124.2	1131.5	1132.5
12.5°	1109.7	1111.8	1112.8	1120.1	1121.1
15°	1092.1	1095.2	1097.2	1106.6	1108.6
17.5°	1072.3	1075.5	1080.6	1091.0	1093.1
20°	1048.5	1052.6	1058.9	1072.3	1075.5
22.5°	1022.6	1026.7	1037.1	1049.5	1054.7
25°	992.5	1000.8	1011.2	1027.8	1030.9
27.5°	962.4	969.7	983.2	1000.8	1004.9
30°	927.2	938.6	955.2	972.8	976.9
32.5°	892.9	904.3	924.0	942.7	947.9
35°	857.7	868.0	888.8	910.6	916.8
37.5°	817.2	830.7	853.5	875.3	881.5
40°	774.7	791.3	817.2	840.0	847.3
42.5°	734.3	751.9	777.8	802.7	811.0
45°	691.7	708.3	739.4	767.4	773.7
47.5°	648.2	666.8	700.0	728.0	738.4
50°	604.6	624.3	659.6	688.6	694.8
52.5°	561.1	581.8	619.1	650.3	653.4
55°	515.4	538.2	577.7	607.7	614.0
57.5°	473.9	493.7	536.2	567.3	574.5
60°	428.3	450.1	495.7	524.8	534.1
62.5°	384.8	407.6	455.3	484.3	492.6
65°	339.1	365.1	411.7	445.9	454.2
67.5°	299.7	324.6	374.4	407.6	415.9
70°	254.1	282.1	335.0	369.2	377.5
72.5°	214.7	243.7	296.6	329.8	342.2
75°	172.2	205.3	258.2	293.5	301.8
77.5°	130.7	169.0	223.0	249.9	249.9
80°	93.3	133.8	183.6	196.0	198.1
82.5°	61.2	100.6	135.9	134.8	134.8
85°	35.3	65.3	80.9	78.8	78.8
87.5°	13.5	27.0	29.0	29.0	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)