

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: P310620

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP250-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: P310620
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: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 3033.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

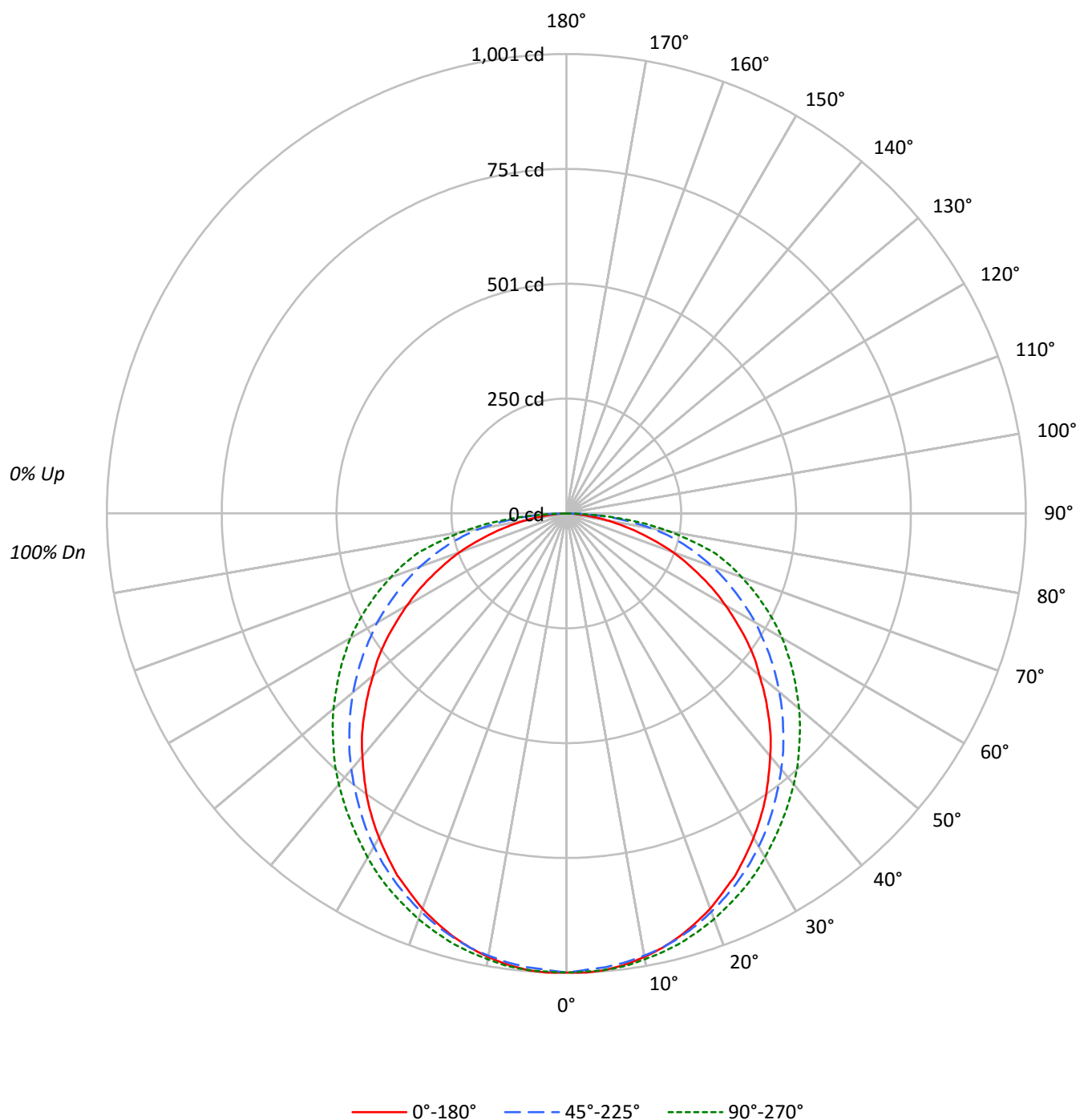
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1346	1346	1346
5°	1348	1340	1348
10°	1340	1336	1347
15°	1329	1332	1349
20°	1313	1323	1347
25°	1292	1313	1346
30°	1268	1302	1345
35°	1243	1289	1345
40°	1214	1280	1354
45°	1185	1271	1365
50°	1150	1268	1386
55°	1121	1270	1414
60°	1078	1281	1462
65°	1028	1294	1515
70°	974	1334	1599
75°	868	1392	1747
80°	741	1474	1785
85°	528	1460	1709



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	3.1
10°-20°	270.7	8.9
20°-30°	408.8	13.5
30°-40°	492.7	16.2
40°-50°	517.3	17.1
50°-60°	484.0	16.0
60°-70°	399.7	13.2
70°-80°	272.3	9.0
80°-90°	92.9	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°	774.2	25.5
0°-40°	1266.9	41.8
0°-60°	2268.2	74.8
0°-90°	3033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	998	997	992	998	998	95
15°	954	955	956	966	968	269
25°	870	874	884	902	907	400
35°	757	765	785	811	819	473
45°	623	636	668	704	718	480
55°	478	497	541	586	603	427
65°	323	350	406	458	476	320
75°	167	205	268	318	336	178
85°	34	67	95	107	111	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1000.3	1000.3	1000.3	1000.3	1000.3
2.5°	1001.3	1000.3	995.2	1000.3	999.3
5°	998.2	997.2	992.2	998.2	998.2
7.5°	991.2	991.2	986.2	993.2	994.2
10°	981.1	981.1	978.1	986.2	986.2
12.5°	969.1	969.1	969.1	977.1	978.1
15°	954.0	955.0	956.0	966.0	968.1
17.5°	935.9	937.9	940.9	953.0	955.0
20°	916.7	918.7	923.8	937.9	940.9
22.5°	892.6	897.6	904.7	920.8	923.8
25°	870.4	874.5	884.5	901.6	906.7
27.5°	843.3	849.3	862.4	880.5	887.6
30°	816.1	822.1	838.2	859.4	865.4
32.5°	786.9	796.0	813.1	835.2	842.3
35°	756.7	764.8	784.9	811.1	819.1
37.5°	723.5	734.6	756.7	784.9	795.0
40°	691.3	703.4	728.6	758.7	770.8
42.5°	659.1	671.2	699.4	733.6	745.7
45°	622.9	636.0	668.2	704.4	717.5
47.5°	586.7	602.8	638.0	676.2	690.3
50°	549.4	567.6	605.8	646.0	662.1
52.5°	516.2	533.3	573.6	616.9	632.0
55°	478.0	497.1	541.4	585.7	602.8
57.5°	438.7	459.9	507.2	555.5	572.6
60°	400.5	423.7	476.0	524.3	543.4
62.5°	363.3	386.4	440.8	491.1	510.2
65°	323.0	350.2	406.5	457.9	476.0
67.5°	284.8	314.0	373.3	423.7	441.8
70°	247.5	275.7	339.1	388.4	406.5
72.5°	207.3	239.5	302.9	354.2	373.3
75°	167.0	205.3	267.7	318.0	336.1
77.5°	129.8	169.1	231.4	272.7	281.8
80°	95.6	135.8	190.2	219.4	230.4
82.5°	61.4	101.6	144.9	166.0	175.1
85°	34.2	67.4	94.6	106.7	110.7
87.5°	14.1	29.2	38.2	43.3	43.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)