

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: P310609

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP187-W2A-U-3500K**

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: P310609
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-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 2940.0 lumens
Efficiency: N/A
Efficacy: 112.6 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

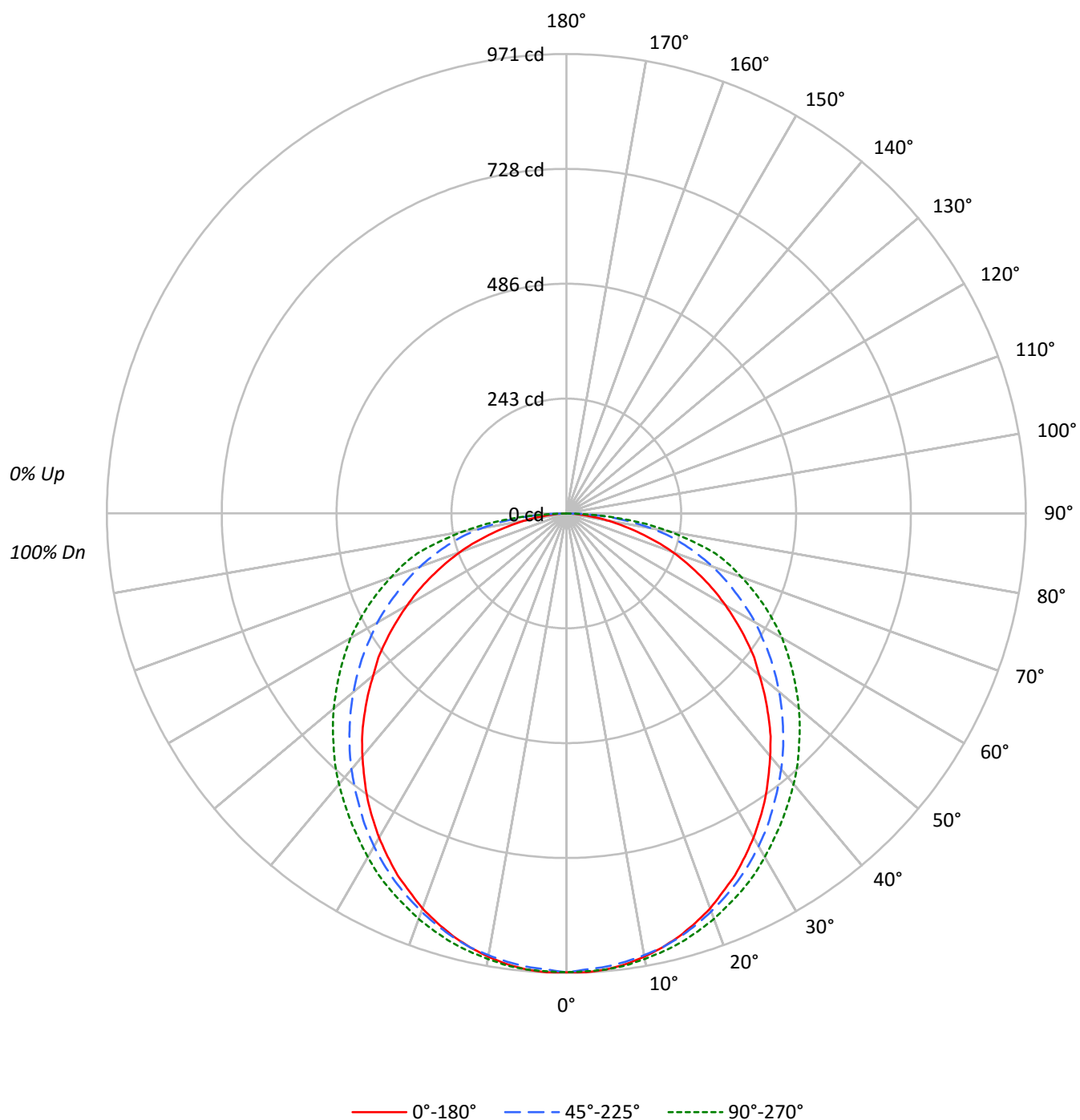
Input Watts (W): 26.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	98	94	105	100	96	92		96	92	89		92	89	87		88	86	84
2	98	89	81	75	95	87	80	74		83	78	73		80	75	71		77	73	69
3	89	77	69	62	86	76	68	61		73	66	60		70	64	59		67	62	58
4	81	68	59	52	79	67	58	52		64	57	51		62	56	50		60	54	50
5	74	61	52	45	72	60	51	44		58	50	44		56	49	43		54	48	43
6	69	55	46	39	67	54	45	39		52	44	38		50	43	38		49	42	38
7	64	50	41	34	62	49	40	34		47	39	34		46	39	34		44	38	33
8	59	45	37	31	57	45	36	30		43	36	30		42	35	30		41	34	30
9	55	41	33	27	54	41	33	27		40	32	27		39	32	27		38	31	27
10	52	38	30	25	50	38	30	25		37	30	25		36	29	25		35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1305	1305	1305
5°	1307	1299	1307
10°	1299	1295	1306
15°	1288	1291	1307
20°	1272	1282	1306
25°	1253	1273	1305
30°	1229	1262	1303
35°	1205	1250	1304
40°	1177	1240	1312
45°	1149	1232	1323
50°	1115	1229	1343
55°	1087	1231	1371
60°	1045	1242	1417
65°	997	1255	1469
70°	944	1293	1550
75°	842	1349	1694
80°	718	1429	1731
85°	513	1416	1656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	3.1
10°-20°	262.4	8.9
20°-30°	396.3	13.5
30°-40°	477.6	16.2
40°-50°	501.4	17.1
50°-60°	469.1	16.0
60°-70°	387.4	13.2
70°-80°	264.0	9.0
80°-90°	90.0	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°	750.4	25.5
0°-40°	1228.1	41.8
0°-60°	2198.6	74.8
0°-90°	2940.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2940.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	968	967	962	968	968	92
15°	925	926	927	936	938	261
25°	844	848	857	874	879	388
35°	734	741	761	786	794	458
45°	604	616	648	683	696	466
55°	463	482	525	568	584	414
65°	313	340	394	444	461	311
75°	162	199	260	308	326	173
85°	33	65	92	103	107	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	969.6	969.6	969.6	969.6	969.6
2.5°	970.6	969.6	964.7	969.6	968.6
5°	967.6	966.7	961.8	967.6	967.6
7.5°	960.8	960.8	955.9	962.8	963.7
10°	951.1	951.1	948.1	955.9	955.9
12.5°	939.3	939.3	939.3	947.2	948.1
15°	924.7	925.7	926.7	936.4	938.4
17.5°	907.2	909.1	912.0	923.7	925.7
20°	888.6	890.6	895.5	909.1	912.0
22.5°	865.2	870.1	876.9	892.5	895.5
25°	843.8	847.7	857.4	874.0	878.9
27.5°	817.4	823.3	836.0	853.5	860.3
30°	791.1	796.9	812.5	833.0	838.9
32.5°	762.8	771.6	788.2	809.6	816.4
35°	733.5	741.3	760.8	786.2	794.0
37.5°	701.3	712.1	733.5	760.8	770.6
40°	670.1	681.8	706.2	735.5	747.2
42.5°	638.9	650.6	677.9	711.1	722.8
45°	603.8	616.5	647.7	682.8	695.5
47.5°	568.7	584.3	618.4	655.5	669.2
50°	532.6	550.1	587.2	626.2	641.8
52.5°	500.4	517.0	556.0	597.9	612.6
55°	463.3	481.9	524.8	567.7	584.3
57.5°	425.3	445.8	491.6	538.4	555.0
60°	388.2	410.7	461.4	508.2	526.7
62.5°	352.1	374.6	427.2	476.0	494.5
65°	313.1	339.5	394.1	443.8	461.4
67.5°	276.0	304.3	361.9	410.7	428.2
70°	240.0	267.3	328.7	376.5	394.1
72.5°	200.9	232.2	293.6	343.4	361.9
75°	161.9	199.0	259.5	308.2	325.8
77.5°	125.8	163.9	224.4	264.3	273.1
80°	92.7	131.7	184.4	212.6	223.4
82.5°	59.5	98.5	140.5	160.9	169.7
85°	33.2	65.4	91.7	103.4	107.3
87.5°	13.7	28.3	37.1	41.9	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)