

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: P310608

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP187-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: P310608
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-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 2842.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

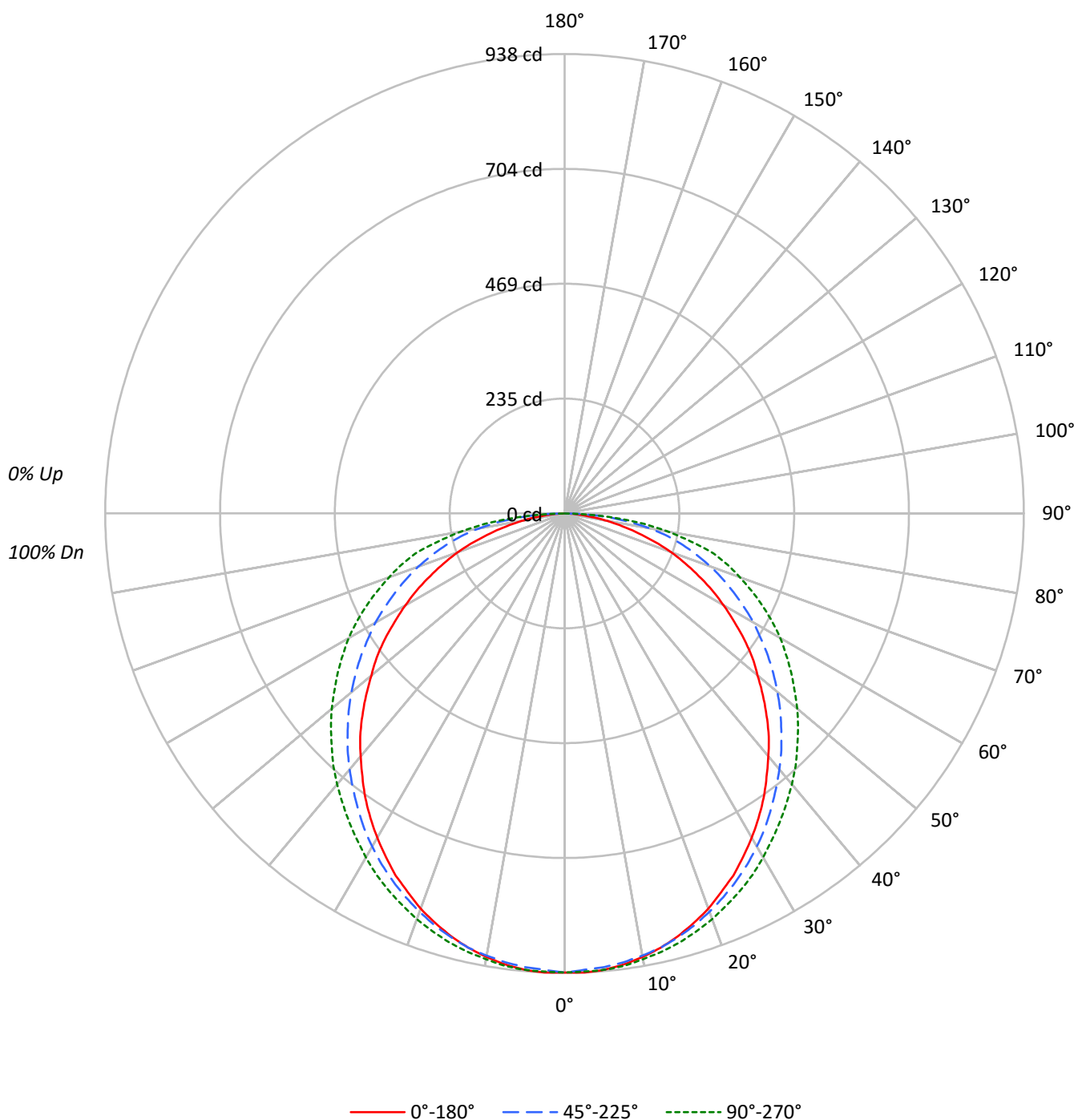
Input Watts (W): 25.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1261	1261	1261
5°	1263	1256	1263
10°	1256	1252	1263
15°	1245	1248	1264
20°	1230	1239	1262
25°	1211	1230	1261
30°	1188	1220	1260
35°	1165	1208	1261
40°	1138	1199	1269
45°	1111	1191	1279
50°	1078	1188	1299
55°	1051	1190	1325
60°	1010	1200	1370
65°	964	1213	1420
70°	913	1250	1498
75°	814	1304	1637
80°	694	1381	1673
85°	496	1368	1601



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	3.1
10°-20°	253.6	8.9
20°-30°	383.1	13.5
30°-40°	461.7	16.2
40°-50°	484.7	17.1
50°-60°	453.5	16.0
60°-70°	374.5	13.2
70°-80°	255.2	9.0
80°-90°	87.0	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°	725.4	25.5
0°-40°	1187.1	41.8
0°-60°	2125.3	74.8
0°-90°	2842.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2842.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	937	937	937	937	937	
5°	935	934	930	935	935	89
15°	894	895	896	905	907	252
25°	816	819	829	845	850	375
35°	709	717	736	760	768	443
45°	584	596	626	660	672	450
55°	448	466	507	549	565	400
65°	303	328	381	429	446	300
75°	156	192	251	298	315	167
85°	32	63	89	100	104	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	937.3	937.3	937.3	937.3	937.3
2.5°	938.2	937.3	932.6	937.3	936.3
5°	935.4	934.4	929.7	935.4	935.4
7.5°	928.8	928.8	924.1	930.7	931.6
10°	919.4	919.4	916.5	924.1	924.1
12.5°	908.0	908.0	908.0	915.6	916.5
15°	893.9	894.8	895.8	905.2	907.1
17.5°	876.9	878.8	881.6	892.9	894.8
20°	859.0	860.9	865.6	878.8	881.6
22.5°	836.4	841.1	847.7	862.8	865.6
25°	815.6	819.4	828.8	844.9	849.6
27.5°	790.2	795.8	808.1	825.1	831.7
30°	764.7	770.4	785.5	805.3	810.9
32.5°	737.4	745.9	761.9	782.6	789.2
35°	709.1	716.6	735.5	760.0	767.5
37.5°	678.0	688.3	709.1	735.5	744.9
40°	647.8	659.1	682.7	711.0	722.3
42.5°	617.6	628.9	655.3	687.4	698.7
45°	583.7	595.9	626.1	660.0	672.3
47.5°	549.7	564.8	597.8	633.6	646.8
50°	514.8	531.8	567.6	605.4	620.4
52.5°	483.7	499.7	537.5	578.0	592.2
55°	447.9	465.8	507.3	548.8	564.8
57.5°	411.1	430.9	475.2	520.5	536.5
60°	375.3	397.0	446.0	491.3	509.2
62.5°	340.4	362.1	413.0	460.1	478.1
65°	302.7	328.1	380.9	429.0	446.0
67.5°	266.8	294.2	349.8	397.0	413.9
70°	232.0	258.4	317.8	364.0	380.9
72.5°	194.2	224.4	283.8	331.9	349.8
75°	156.5	192.4	250.8	298.0	314.9
77.5°	121.6	158.4	216.9	255.5	264.0
80°	89.6	127.3	178.2	205.6	215.9
82.5°	57.5	95.2	135.8	155.6	164.1
85°	32.1	63.2	88.6	99.9	103.7
87.5°	13.2	27.3	35.8	40.5	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)