

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: P310607

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP187-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: P310607
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-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 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: 2762.0 lumens
Efficiency: N/A
Efficacy: 106.2 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

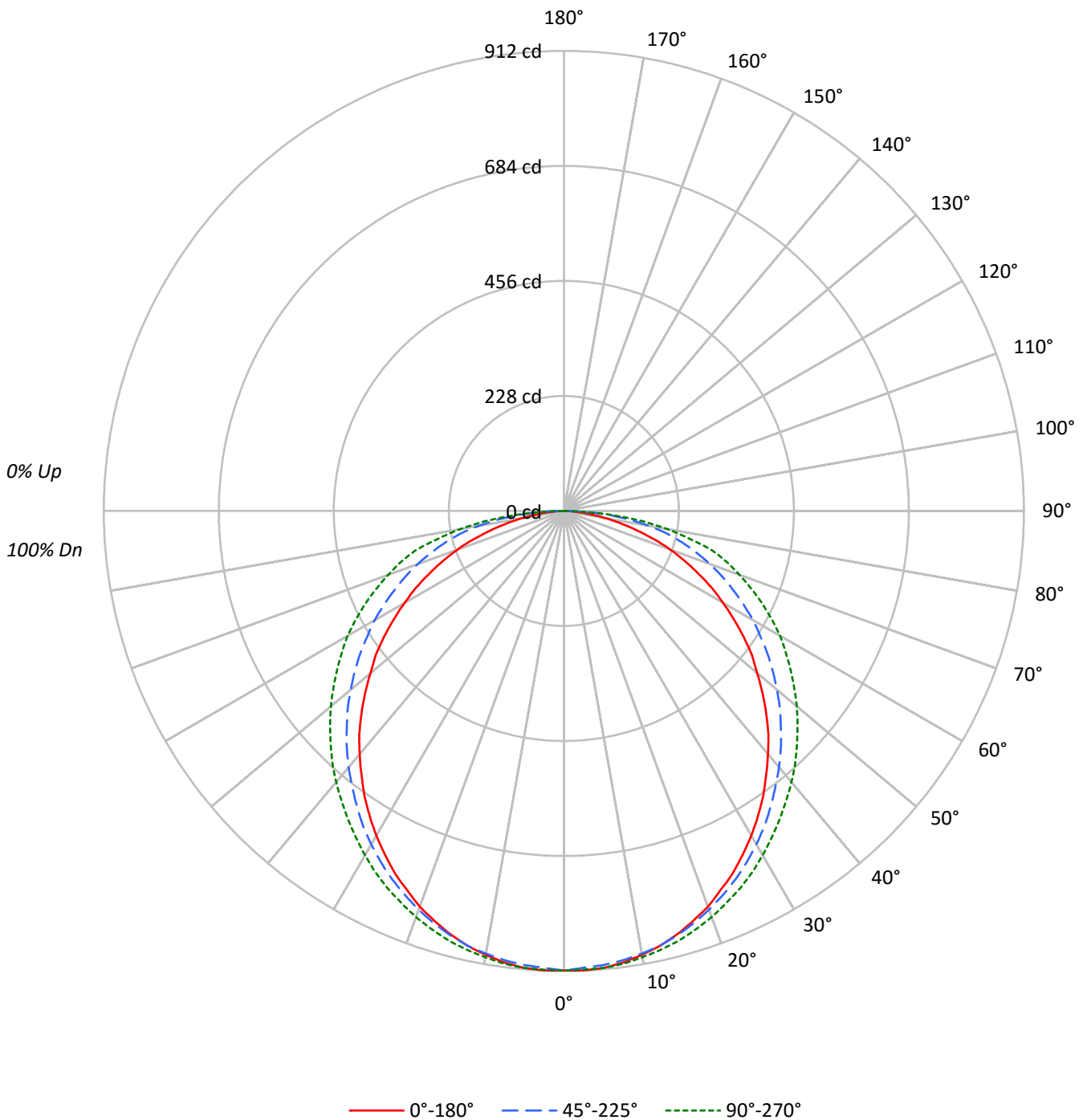
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1226	1226	1226
5°	1228	1220	1228
10°	1221	1217	1227
15°	1210	1213	1228
20°	1195	1204	1227
25°	1177	1196	1226
30°	1155	1186	1224
35°	1132	1174	1225
40°	1106	1165	1233
45°	1079	1158	1243
50°	1047	1155	1262
55°	1021	1156	1288
60°	981	1166	1331
65°	937	1179	1380
70°	887	1215	1456
75°	791	1267	1591
80°	675	1342	1626
85°	482	1329	1556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	3.1
10°-20°	246.5	8.9
20°-30°	372.3	13.5
30°-40°	448.7	16.2
40°-50°	471.1	17.1
50°-60°	440.7	16.0
60°-70°	363.9	13.2
70°-80°	248.0	9.0
80°-90°	84.6	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°	705.0	25.5
0°-40°	1153.7	41.8
0°-60°	2065.5	74.8
0°-90°	2762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	909	908	904	909	909	86
15°	869	870	871	880	882	245
25°	793	796	806	821	826	365
35°	689	696	715	739	746	431
45°	567	579	608	642	653	437
55°	435	453	493	533	549	389
65°	294	319	370	417	433	292
75°	152	187	244	290	306	162
85°	31	61	86	97	101	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	910.9	910.9	910.9	910.9	910.9
2.5°	911.8	910.9	906.3	910.9	910.0
5°	909.1	908.1	903.6	909.1	909.1
7.5°	902.6	902.6	898.1	904.5	905.4
10°	893.5	893.5	890.7	898.1	898.1
12.5°	882.5	882.5	882.5	889.8	890.7
15°	868.7	869.6	870.6	879.7	881.6
17.5°	852.2	854.1	856.8	867.8	869.6
20°	834.8	836.7	841.2	854.1	856.8
22.5°	812.8	817.4	823.8	838.5	841.2
25°	792.7	796.3	805.5	821.1	825.7
27.5°	767.9	773.4	785.3	801.8	808.2
30°	743.2	748.7	763.3	782.6	788.1
32.5°	716.6	724.9	740.4	760.6	767.0
35°	689.1	696.5	714.8	738.6	745.9
37.5°	658.9	669.0	689.1	714.8	723.9
40°	629.6	640.6	663.5	691.0	701.9
42.5°	600.2	611.2	636.9	668.0	679.0
45°	567.2	579.2	608.5	641.5	653.4
47.5°	534.3	548.9	581.0	615.8	628.6
50°	500.3	516.8	551.7	588.3	603.0
52.5°	470.1	485.7	522.3	561.7	575.5
55°	435.3	452.7	493.0	533.3	548.9
57.5°	399.5	418.8	461.9	505.8	521.4
60°	364.7	385.8	433.4	477.4	494.8
62.5°	330.8	351.9	401.4	447.2	464.6
65°	294.2	318.9	370.2	417.0	433.4
67.5°	259.3	285.9	340.0	385.8	402.3
70°	225.4	251.1	308.8	353.7	370.2
72.5°	188.8	218.1	275.8	322.6	340.0
75°	152.1	186.9	243.8	289.6	306.1
77.5°	118.2	154.0	210.8	248.3	256.6
80°	87.1	123.7	173.2	199.8	209.9
82.5°	55.9	92.6	132.0	151.2	159.5
85°	31.2	61.4	86.1	97.1	100.8
87.5°	12.8	26.6	34.8	39.4	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)