

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: P309910

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CA08-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: P309910  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
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-RDP-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 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**

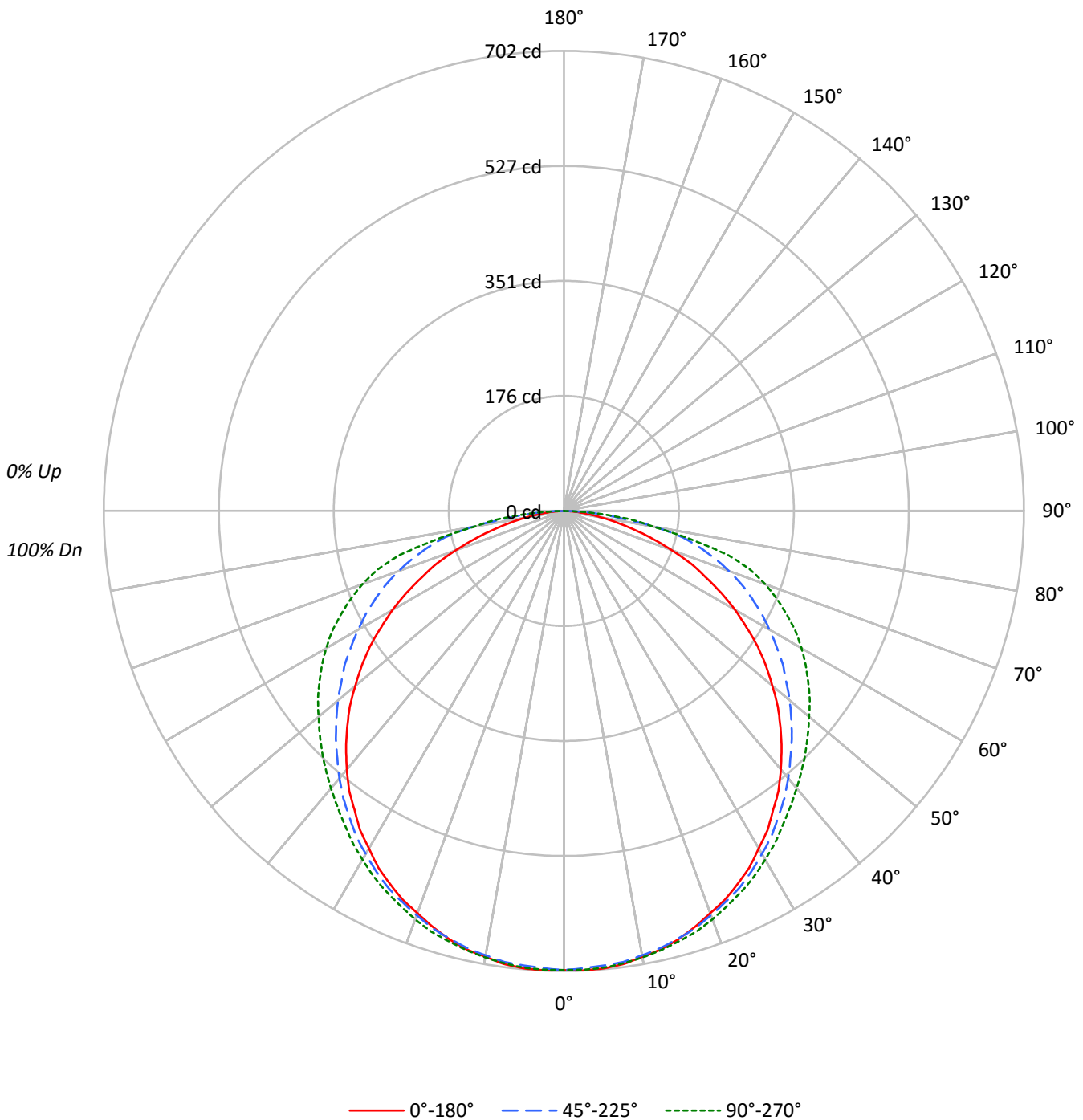
Lumens per Lamp: N/A  
Luminaire Lumens: 2228.0 lumens  
Efficiency: N/A  
Efficacy: 83.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	943	943	943
5°	946	940	945
10°	944	941	945
15°	942	941	947
20°	935	940	949
25°	932	942	952
30°	924	939	955
35°	915	937	958
40°	905	936	971
45°	890	936	993
50°	870	942	1023
55°	848	957	1068
60°	812	975	1127
65°	760	1010	1196
70°	691	1056	1287
75°	586	1115	1344
80°	463	1122	1087
85°	341	854	956



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.5	3.0
10°-20°	191.3	8.6
20°-30°	292.5	13.1
30°-40°	357.6	16.0
40°-50°	381.1	17.1
50°-60°	364.4	16.4
60°-70°	308.7	13.9
70°-80°	207.5	9.3
80°-90°	58.5	2.6
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°	550.2	24.7
0°-40°	907.8	40.7
0°-60°	1653.3	74.2
0°-90°	2228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2228.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	701	701	701	701	701	
5°	701	700	696	700	700	67
15°	676	676	675	681	680	191
25°	628	630	634	640	641	289
35°	557	561	570	581	584	349
45°	468	475	492	513	522	361
55°	361	375	408	440	455	322
65°	239	263	317	359	376	237
75°	113	154	214	251	259	121
85°	22	45	55	60	62	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	700.6	700.6	700.6	700.6	700.6
2.5°	701.7	701.7	698.4	700.6	700.6
5°	700.6	699.5	696.2	699.5	699.5
7.5°	697.3	696.2	694.0	697.3	696.2
10°	690.7	690.7	688.5	691.8	691.8
12.5°	685.2	684.1	683.0	687.4	686.3
15°	676.3	676.3	675.2	680.8	679.6
17.5°	665.3	666.4	667.5	671.9	673.0
20°	653.1	655.3	656.4	663.1	663.1
22.5°	642.1	643.2	645.4	652.0	652.0
25°	627.7	629.9	634.3	639.9	641.0
27.5°	613.3	614.4	620.0	627.7	628.8
30°	594.6	597.9	604.5	613.3	614.4
32.5°	578.0	581.3	589.0	597.9	600.1
35°	557.0	561.4	570.2	581.3	583.5
37.5°	538.2	541.5	552.6	564.7	568.0
40°	515.0	521.6	532.7	547.0	552.6
42.5°	491.8	498.4	511.7	530.5	537.1
45°	467.5	475.2	491.8	512.8	521.6
47.5°	443.2	452.0	470.8	495.1	505.0
50°	415.5	426.6	449.8	477.4	488.5
52.5°	389.0	402.3	427.7	458.6	473.0
55°	361.4	374.6	407.8	439.8	455.3
57.5°	330.4	348.1	384.6	421.0	437.6
60°	301.7	318.3	362.5	402.3	418.8
62.5°	270.8	292.9	340.4	382.4	398.9
65°	238.7	263.0	317.2	359.2	375.7
67.5°	210.0	236.5	294.0	336.0	352.5
70°	175.7	208.9	268.5	310.5	327.1
72.5°	143.7	180.1	242.0	282.9	298.4
75°	112.7	153.6	214.4	250.9	258.6
77.5°	84.0	127.1	185.7	201.1	195.6
80°	59.7	101.7	144.8	137.0	140.3
82.5°	38.7	77.4	89.5	101.7	105.0
85°	22.1	45.3	55.3	59.7	61.9
87.5°	9.9	16.6	22.1	22.1	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)