

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: P313107

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CP187-W2A-U-4000K**

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: P313107  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-L83050-HRP-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (336) 4000K 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**

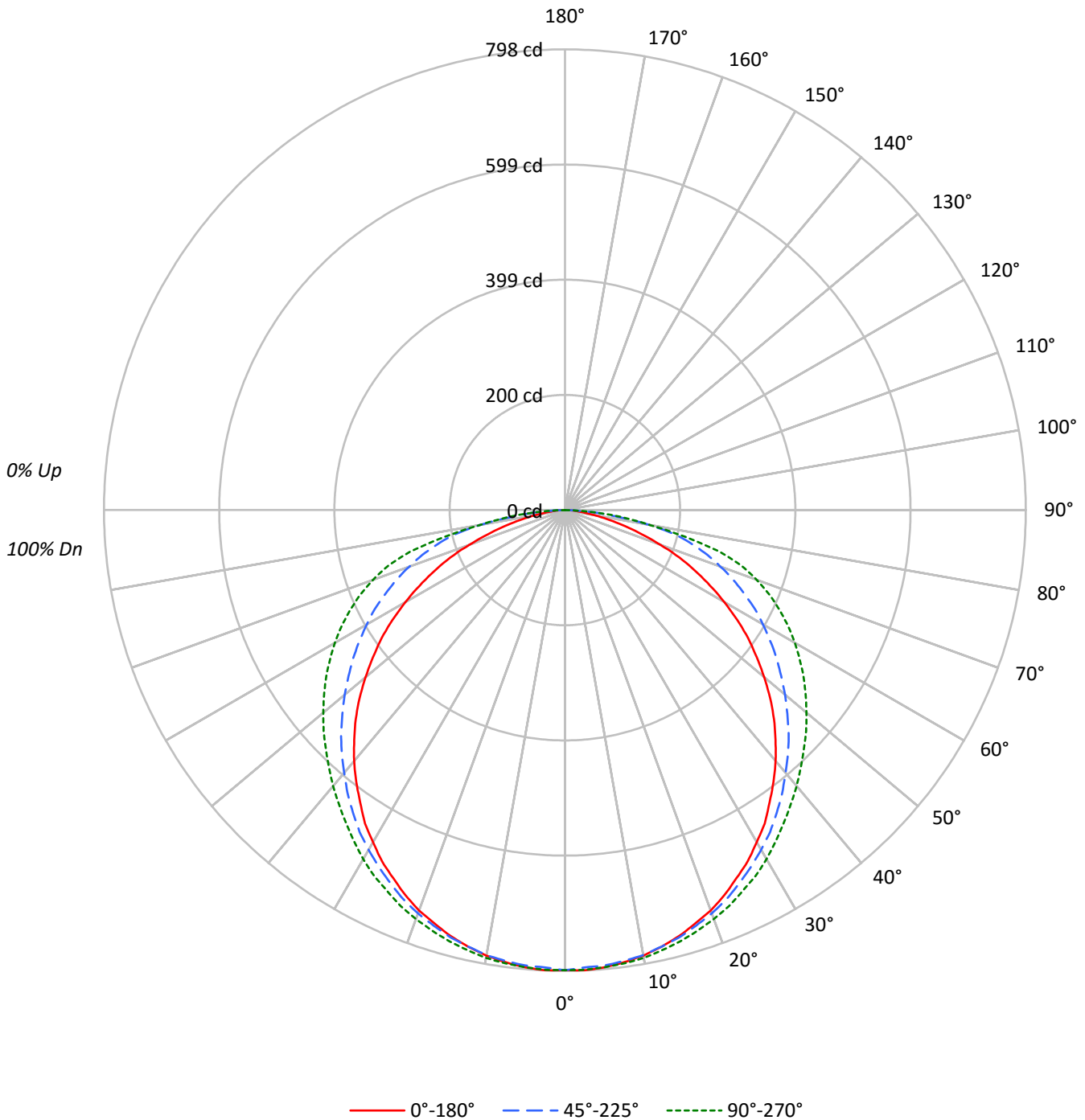
Lumens per Lamp: N/A  
Luminaire Lumens: 2456.0 lumens  
Efficiency: N/A  
Efficacy: 92.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1072	1072	1072
5°	1073	1069	1073
10°	1070	1069	1076
15°	1064	1067	1077
20°	1057	1064	1079
25°	1044	1059	1081
30°	1032	1056	1085
35°	1015	1050	1086
40°	997	1044	1096
45°	974	1043	1113
50°	943	1042	1143
55°	909	1049	1184
60°	858	1065	1237
65°	792	1090	1306
70°	692	1129	1391
75°	561	1187	1438
80°	415	1163	1163
85°	318	857	968



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.5	3.1
10°-20°	216.8	8.8
20°-30°	330.0	13.4
30°-40°	400.7	16.3
40°-50°	423.3	17.2
50°-60°	399.5	16.3
60°-70°	332.2	13.5
70°-80°	218.5	8.9
80°-90°	59.6	2.4
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°	622.3	25.3
0°-40°	1023.0	41.7
0°-60°	1845.8	75.2
0°-90°	2456.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2456.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	797	797	797	797	797	
5°	795	795	792	795	795	75
15°	764	765	766	773	773	215
25°	703	707	714	726	728	324
35°	618	625	640	656	661	387
45°	512	522	548	575	585	394
55°	388	404	447	489	505	345
65°	249	278	342	393	410	246
75°	108	157	228	270	277	116
85°	21	45	56	62	63	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	796.9	796.9	796.9	796.9	796.9
2.5°	797.9	796.9	792.7	796.9	796.9
5°	794.8	794.8	791.7	794.8	794.8
7.5°	789.7	789.7	787.6	791.7	791.7
10°	783.5	783.5	782.5	787.6	787.6
12.5°	774.2	775.3	774.2	780.4	780.4
15°	763.9	765.0	766.0	773.2	773.2
17.5°	750.6	752.6	754.7	762.9	763.9
20°	738.2	739.3	743.4	752.6	753.7
22.5°	721.8	724.9	730.0	739.3	742.4
25°	703.3	707.4	713.6	725.9	728.0
27.5°	685.8	688.9	697.1	710.5	714.6
30°	664.2	669.4	679.6	693.0	698.1
32.5°	643.7	648.8	661.1	675.5	679.6
35°	617.9	625.1	639.5	656.0	661.1
37.5°	593.3	600.5	617.9	636.5	642.6
40°	567.6	575.8	594.3	615.9	624.1
42.5°	539.8	551.1	571.7	595.3	604.6
45°	512.0	522.3	548.0	574.8	585.0
47.5°	482.2	494.6	522.3	554.2	566.5
50°	450.3	465.8	497.6	532.6	546.0
52.5°	418.5	436.0	471.9	511.0	525.4
55°	387.6	404.1	447.3	489.4	504.8
57.5°	353.7	374.3	421.6	466.8	482.2
60°	318.7	341.4	395.9	443.2	459.6
62.5°	283.8	309.5	371.2	418.5	436.0
65°	248.8	277.6	342.4	392.8	410.2
67.5°	214.9	246.8	315.7	366.0	383.5
70°	175.8	215.9	286.9	336.2	353.7
72.5°	139.8	186.1	259.1	305.4	320.8
75°	108.0	157.3	228.3	270.4	276.6
77.5°	79.2	128.5	196.4	210.8	211.8
80°	53.5	102.8	150.1	148.1	150.1
82.5°	35.0	77.1	94.6	105.9	106.9
85°	20.6	45.2	55.5	61.7	62.7
87.5°	10.3	15.4	19.5	20.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)