

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: P310297

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP187-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: P310297  
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: 24FCZ2-55HE-UNV-L82765-RDP-CP187-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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**

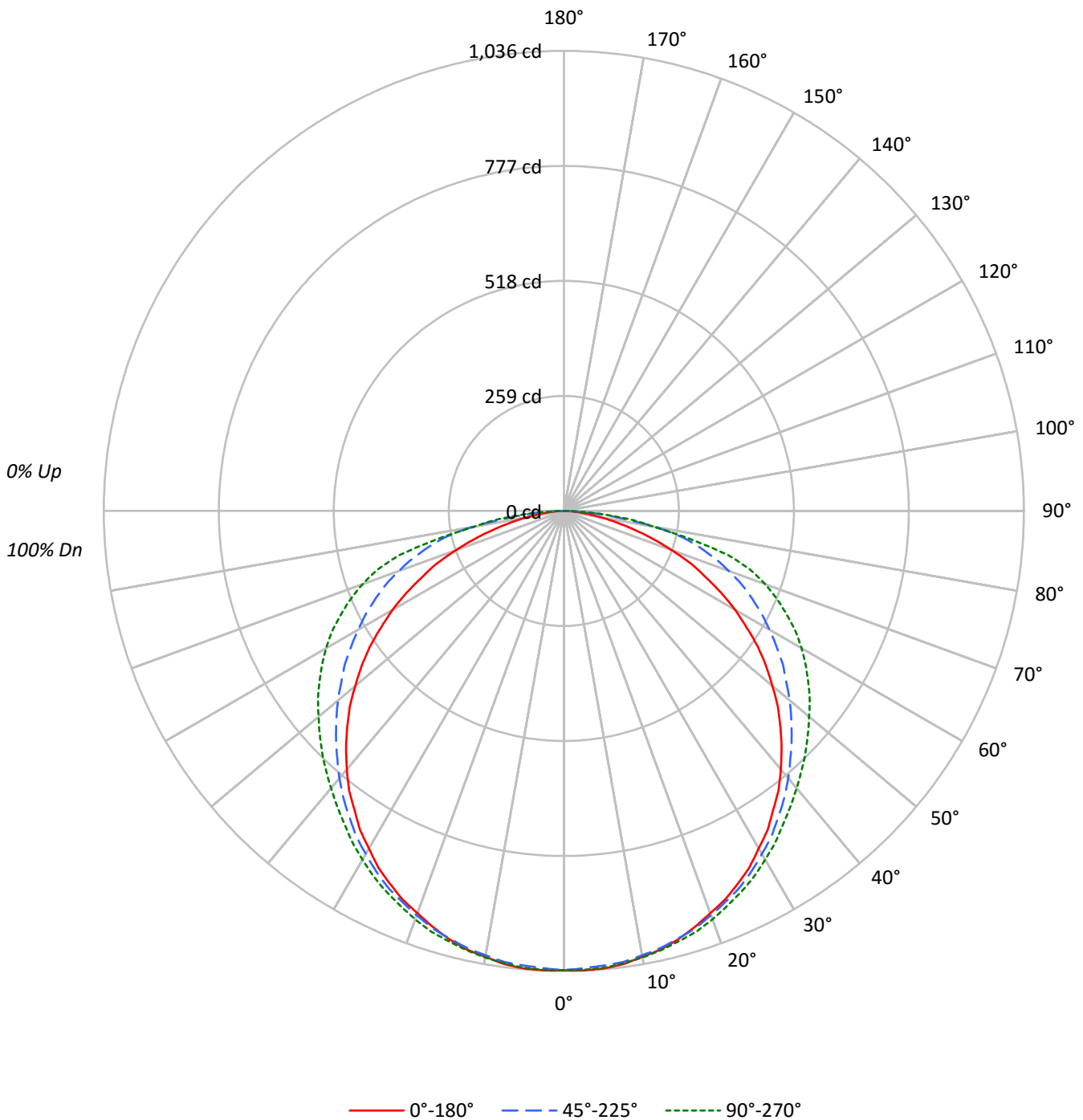
Lumens per Lamp: N/A  
Luminaire Lumens: 3288.0 lumens  
Efficiency: N/A  
Efficacy: 74.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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				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°	1391	1391	1391
5°	1397	1388	1394
10°	1393	1388	1395
15°	1390	1388	1397
20°	1380	1387	1401
25°	1375	1390	1404
30°	1363	1386	1409
35°	1350	1382	1414
40°	1335	1381	1432
45°	1313	1381	1465
50°	1284	1389	1509
55°	1251	1412	1576
60°	1198	1439	1663
65°	1122	1490	1765
70°	1020	1559	1899
75°	865	1645	1984
80°	683	1655	1605
85°	503	1258	1409



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.1	3.0
10°-20°	282.3	8.6
20°-30°	431.7	13.1
30°-40°	527.7	16.0
40°-50°	562.4	17.1
50°-60°	537.7	16.4
60°-70°	455.6	13.9
70°-80°	306.2	9.3
80°-90°	86.4	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°	812.0	24.7
0°-40°	1339.7	40.7
0°-60°	2439.9	74.2
0°-90°	3288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3288.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1034	1034	1034	1034	1034	
5°	1034	1032	1028	1032	1032	98
15°	998	998	996	1005	1003	281
25°	926	930	936	944	946	427
35°	822	828	842	858	861	515
45°	690	701	726	757	770	532
55°	533	553	602	649	672	475
65°	352	388	468	530	554	350
75°	166	227	316	370	382	178
85°	33	67	82	88	91	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1034.0	1034.0	1034.0	1034.0	1034.0
2.5°	1035.6	1035.6	1030.7	1034.0	1034.0
5°	1034.0	1032.4	1027.5	1032.4	1032.4
7.5°	1029.1	1027.5	1024.2	1029.1	1027.5
10°	1019.3	1019.3	1016.0	1020.9	1020.9
12.5°	1011.1	1009.5	1007.9	1014.4	1012.8
15°	998.1	998.1	996.5	1004.6	1003.0
17.5°	981.8	983.4	985.1	991.6	993.2
20°	963.9	967.1	968.7	978.5	978.5
22.5°	947.5	949.2	952.4	962.2	962.2
25°	926.3	929.6	936.1	944.3	945.9
27.5°	905.1	906.8	914.9	926.3	928.0
30°	877.4	882.3	892.1	905.1	906.8
32.5°	853.0	857.8	869.3	882.3	885.6
35°	822.0	828.5	841.5	857.8	861.1
37.5°	794.2	799.1	815.4	833.4	838.3
40°	760.0	769.8	786.1	807.3	815.4
42.5°	725.7	735.5	755.1	782.8	792.6
45°	689.9	701.3	725.7	756.7	769.8
47.5°	654.0	667.0	694.8	730.6	745.3
50°	613.2	629.5	663.8	704.5	720.9
52.5°	574.1	593.6	631.2	676.8	698.0
55°	533.3	552.9	601.8	649.1	671.9
57.5°	487.6	513.7	567.5	621.4	645.8
60°	445.2	469.7	534.9	593.6	618.1
62.5°	399.6	432.2	502.3	564.3	588.8
65°	352.3	388.2	468.1	530.0	554.5
67.5°	309.9	349.0	433.8	495.8	520.3
70°	259.3	308.2	396.3	458.3	482.7
72.5°	212.0	265.8	357.2	417.5	440.3
75°	166.4	226.7	316.4	370.2	381.6
77.5°	123.9	187.6	274.0	296.8	288.7
80°	88.1	150.0	213.6	202.2	207.1
82.5°	57.1	114.2	132.1	150.0	154.9
85°	32.6	66.9	81.5	88.1	91.3
87.5°	14.7	24.5	32.6	32.6	31.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)