

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: P311200

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP187-W2A-U-6500K**

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: P311200  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30HE-UNV-L82765-S-CP187-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (336) 6500K 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**

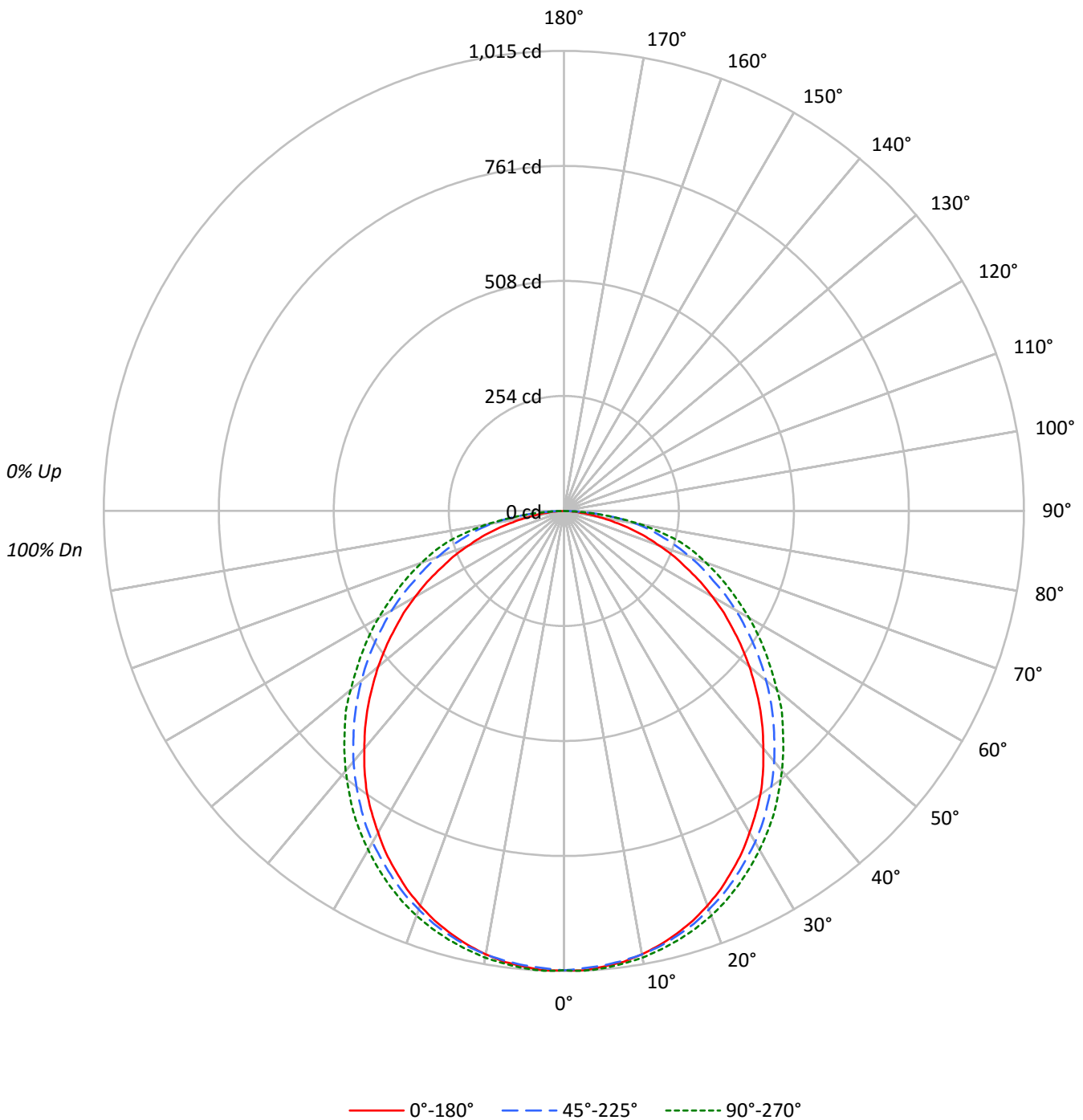
Lumens per Lamp: N/A  
Luminaire Lumens: 2885.0 lumens  
Efficiency: N/A  
Efficacy: 131.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1364	1364	1364
5°	1363	1359	1368
10°	1357	1357	1367
15°	1344	1350	1365
20°	1327	1340	1361
25°	1302	1326	1352
30°	1273	1311	1341
35°	1245	1290	1331
40°	1202	1268	1315
45°	1163	1243	1301
50°	1118	1220	1285
55°	1068	1197	1273
60°	1019	1179	1270
65°	954	1158	1278
70°	883	1164	1312
75°	791	1186	1386
80°	639	1257	1356
85°	482	1104	1074



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.0	3.3
10°-20°	274.2	9.5
20°-30°	412.1	14.3
30°-40°	490.9	17.0
40°-50°	502.4	17.4
50°-60°	452.3	15.7
60°-70°	355.2	12.3
70°-80°	230.5	8.0
80°-90°	71.3	2.5
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°	782.2	27.1
0°-40°	1273.2	44.1
0°-60°	2227.9	77.2
0°-90°	2885.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2885.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1014	1014	1014	1014	1014	
5°	1009	1011	1006	1012	1013	96
15°	965	968	970	978	980	272
25°	877	884	894	908	911	404
35°	758	767	785	805	810	473
45°	611	626	653	678	684	471
55°	455	476	510	537	542	408
65°	300	323	364	394	401	298
75°	152	181	228	259	267	161
85°	31	58	72	70	70	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1013.5	1013.5	1013.5	1013.5	1013.5
2.5°	1014.4	1014.4	1009.9	1014.4	1015.4
5°	1008.9	1010.8	1006.2	1011.7	1012.6
7.5°	1003.4	1003.4	1000.7	1006.2	1007.1
10°	993.4	994.3	993.4	999.8	1000.7
12.5°	980.5	982.4	983.3	989.7	990.6
15°	965.0	967.7	969.5	977.8	979.6
17.5°	947.5	950.3	954.9	964.0	965.9
20°	926.5	930.1	935.6	947.5	950.3
22.5°	903.6	907.2	916.4	927.4	932.0
25°	877.0	884.3	893.5	908.1	910.9
27.5°	850.4	856.8	868.7	884.3	888.0
30°	819.2	829.3	844.0	859.6	863.2
32.5°	789.0	799.1	816.5	833.0	837.6
35°	757.8	767.0	785.3	804.6	810.1
37.5°	722.1	734.0	754.2	773.4	778.9
40°	684.5	699.2	722.1	742.3	748.7
42.5°	648.8	664.4	687.3	709.3	716.6
45°	611.2	625.9	653.4	678.1	683.6
47.5°	572.7	589.2	618.6	643.3	652.5
50°	534.3	551.7	582.8	608.5	614.0
52.5°	495.8	514.1	547.1	574.6	577.3
55°	455.4	475.6	510.4	537.0	542.5
57.5°	418.8	436.2	473.8	501.3	507.7
60°	378.5	397.7	438.0	463.7	471.9
62.5°	340.0	360.1	402.3	428.0	435.3
65°	299.7	322.6	363.8	394.0	401.4
67.5°	264.8	286.8	330.8	360.1	367.5
70°	224.5	249.3	296.0	326.2	333.6
72.5°	189.7	215.3	262.1	291.4	302.4
75°	152.1	181.4	228.2	259.3	266.7
77.5°	115.5	149.4	197.0	220.8	220.8
80°	82.5	118.2	162.2	173.2	175.0
82.5°	54.1	88.9	120.0	119.1	119.1
85°	31.2	57.7	71.5	69.6	69.6
87.5°	11.9	23.8	25.7	25.7	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)