

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: P311194

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP187-W2A-U-3500K**

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: P311194
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 2695.0 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

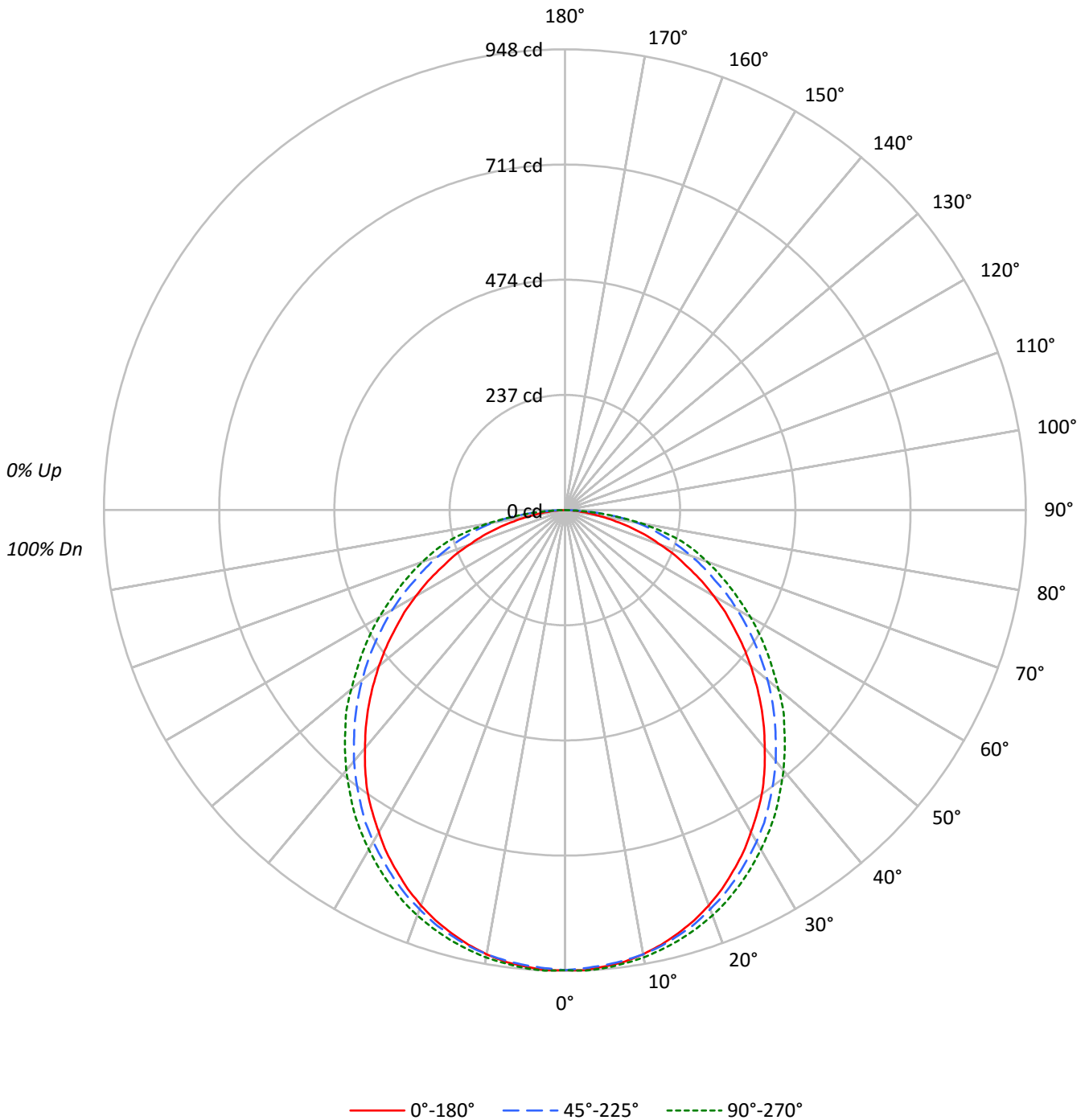
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1274	1274	1274
5°	1273	1269	1278
10°	1268	1268	1277
15°	1256	1262	1275
20°	1239	1251	1271
25°	1216	1239	1263
30°	1189	1225	1253
35°	1163	1205	1243
40°	1123	1185	1228
45°	1087	1161	1215
50°	1045	1140	1200
55°	998	1118	1189
60°	951	1101	1186
65°	891	1082	1194
70°	825	1088	1226
75°	739	1108	1295
80°	597	1174	1267
85°	449	1031	1005



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	3.3
10°-20°	256.1	9.5
20°-30°	385.0	14.3
30°-40°	458.6	17.0
40°-50°	469.3	17.4
50°-60°	422.5	15.7
60°-70°	331.8	12.3
70°-80°	215.4	8.0
80°-90°	66.6	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°	730.7	27.1
0°-40°	1189.3	44.1
0°-60°	2081.2	77.2
0°-90°	2695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	942	944	940	945	946	90
15°	901	904	906	913	915	254
25°	819	826	835	848	851	377
35°	708	716	734	752	757	442
45°	571	585	610	634	639	440
55°	425	444	477	502	507	381
65°	280	301	340	368	375	279
75°	142	170	213	242	249	150
85°	29	54	67	65	65	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	946.8	946.8	946.8	946.8	946.8
2.5°	947.6	947.6	943.3	947.6	948.5
5°	942.5	944.2	939.9	945.1	945.9
7.5°	937.4	937.4	934.8	939.9	940.8
10°	927.9	928.8	927.9	933.9	934.8
12.5°	916.0	917.7	918.5	924.5	925.4
15°	901.4	904.0	905.7	913.4	915.1
17.5°	885.1	887.7	892.0	900.5	902.3
20°	865.4	868.9	874.0	885.1	887.7
22.5°	844.0	847.5	856.0	866.3	870.6
25°	819.2	826.1	834.6	848.3	850.9
27.5°	794.4	800.4	811.5	826.1	829.5
30°	765.3	774.7	788.4	803.0	806.4
32.5°	737.0	746.5	762.7	778.1	782.4
35°	707.9	716.5	733.6	751.6	756.7
37.5°	674.6	685.7	704.5	722.5	727.6
40°	639.5	653.2	674.6	693.4	699.4
42.5°	606.1	620.6	642.0	662.6	669.4
45°	571.0	584.7	610.4	633.5	638.6
47.5°	535.0	550.4	577.8	600.9	609.5
50°	499.1	515.3	544.4	568.4	573.5
52.5°	463.1	480.2	511.1	536.7	539.3
55°	425.4	444.3	476.8	501.6	506.8
57.5°	391.2	407.5	442.6	468.2	474.2
60°	353.5	371.5	409.2	433.2	440.9
62.5°	317.6	336.4	375.8	399.8	406.6
65°	279.9	301.3	339.8	368.1	374.9
67.5°	247.4	267.9	309.0	336.4	343.3
70°	209.7	232.8	276.5	304.7	311.6
72.5°	177.2	201.2	244.8	272.2	282.5
75°	142.1	169.5	213.2	242.3	249.1
77.5°	107.9	139.5	184.0	206.3	206.3
80°	77.0	110.4	151.5	161.8	163.5
82.5°	50.5	83.0	112.1	111.3	111.3
85°	29.1	53.9	66.8	65.1	65.1
87.5°	11.1	22.3	24.0	24.0	23.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)