

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: P311206

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP250-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: P311206
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 2818.0 lumens
Efficiency: N/A
Efficacy: 130.5 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

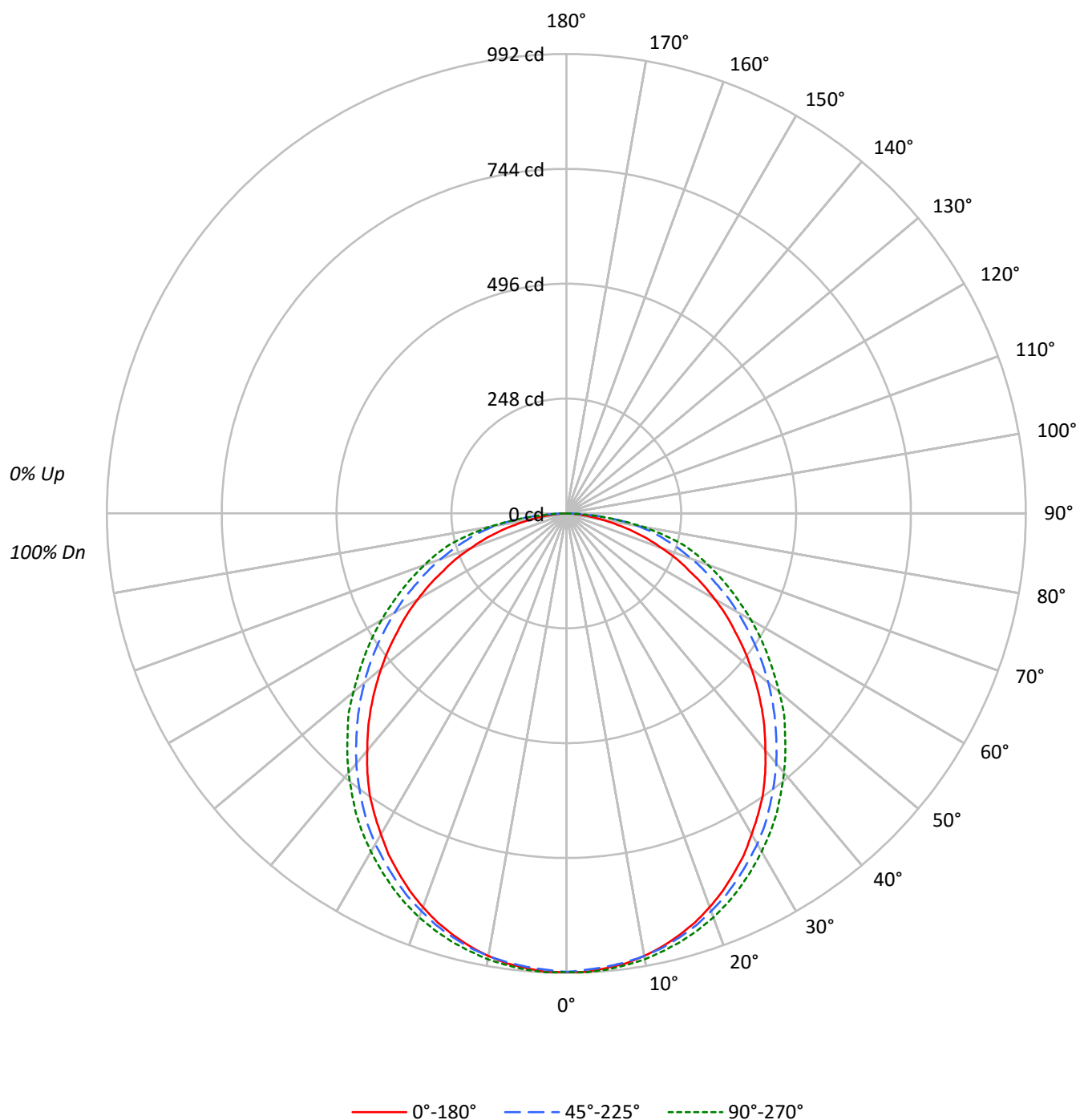
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1332	1332	1332
5°	1331	1327	1336
10°	1326	1326	1336
15°	1313	1319	1333
20°	1296	1309	1329
25°	1272	1296	1321
30°	1243	1281	1310
35°	1216	1260	1300
40°	1174	1239	1284
45°	1136	1214	1271
50°	1092	1192	1255
55°	1044	1170	1243
60°	995	1151	1241
65°	932	1131	1248
70°	863	1137	1282
75°	773	1159	1354
80°	625	1227	1325
85°	469	1078	1050



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	3.3
10°-20°	267.8	9.5
20°-30°	402.6	14.3
30°-40°	479.5	17.0
40°-50°	490.8	17.4
50°-60°	441.8	15.7
60°-70°	347.0	12.3
70°-80°	225.2	8.0
80°-90°	69.7	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°	764.1	27.1
0°-40°	1243.6	44.1
0°-60°	2176.2	77.2
0°-90°	2818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	986	987	983	988	989	94
15°	942	945	947	955	957	266
25°	857	864	873	887	890	395
35°	740	749	767	786	791	462
45°	597	611	638	662	668	460
55°	445	465	499	524	530	399
65°	293	315	355	385	392	291
75°	149	177	223	253	260	157
85°	30	56	70	68	68	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	990.0	990.0	990.0	990.0	990.0
2.5°	990.9	990.9	986.4	990.9	991.8
5°	985.5	987.3	982.8	988.2	989.1
7.5°	980.1	980.1	977.5	982.8	983.7
10°	970.3	971.2	970.3	976.6	977.5
12.5°	957.8	959.5	960.4	966.7	967.6
15°	942.5	945.2	947.0	955.1	956.9
17.5°	925.5	928.2	932.7	941.6	943.4
20°	904.9	908.5	913.9	925.5	928.2
22.5°	882.6	886.2	895.1	905.8	910.3
25°	856.6	863.8	872.7	887.0	889.7
27.5°	830.7	836.9	848.6	863.8	867.4
30°	800.2	810.1	824.4	839.6	843.2
32.5°	770.7	780.5	797.5	813.6	818.1
35°	740.2	749.2	767.1	785.9	791.3
37.5°	705.3	717.0	736.7	755.5	760.8
40°	668.6	683.0	705.3	725.0	731.3
42.5°	633.7	648.9	671.3	692.8	700.0
45°	597.0	611.4	638.2	662.4	667.7
47.5°	559.4	575.6	604.2	628.4	637.3
50°	521.8	538.9	569.3	594.3	599.7
52.5°	484.2	502.2	534.4	561.2	563.9
55°	444.9	464.6	498.6	524.5	529.9
57.5°	409.1	426.1	462.8	489.6	495.9
60°	369.7	388.5	427.9	452.9	461.0
62.5°	332.1	351.8	392.9	418.0	425.2
65°	292.7	315.1	355.4	384.9	392.1
67.5°	258.7	280.2	323.1	351.8	358.9
70°	219.3	243.5	289.1	318.7	325.8
72.5°	185.3	210.3	256.0	284.6	295.4
75°	148.6	177.2	222.9	253.3	260.5
77.5°	112.8	145.9	192.4	215.7	215.7
80°	80.6	115.5	158.4	169.2	171.0
82.5°	52.8	86.8	117.3	116.4	116.4
85°	30.4	56.4	69.8	68.0	68.0
87.5°	11.6	23.3	25.1	25.1	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)