

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: P313798

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4500K**

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: P313798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L83050-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 2965.0 lumens
Efficiency: N/A
Efficacy: 134.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

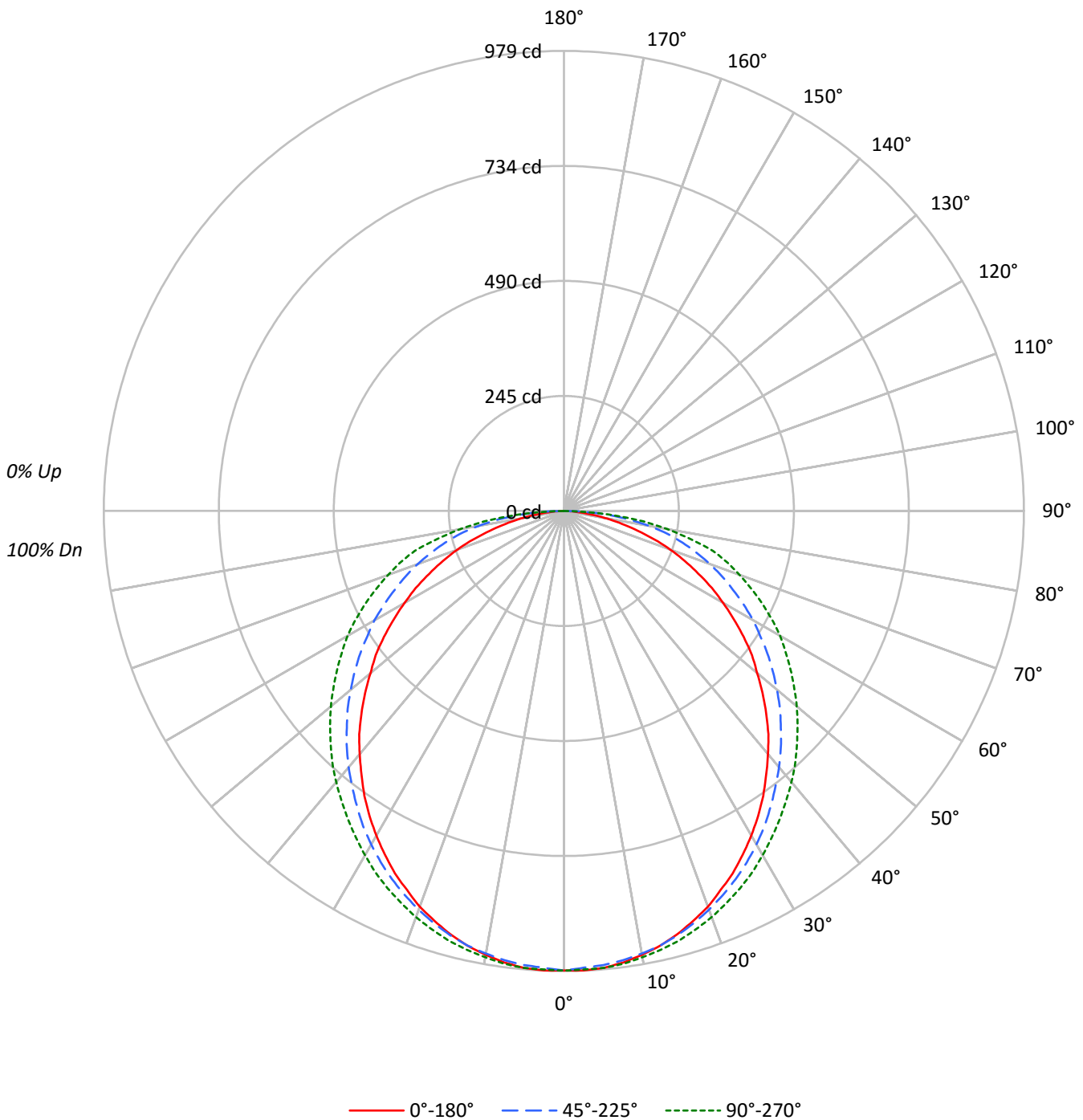
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1316	1316	1316
5°	1318	1310	1318
10°	1310	1306	1317
15°	1299	1302	1318
20°	1283	1293	1317
25°	1263	1284	1316
30°	1239	1273	1314
35°	1215	1260	1315
40°	1187	1251	1323
45°	1159	1243	1335
50°	1124	1240	1355
55°	1096	1241	1382
60°	1054	1252	1429
65°	1005	1265	1481
70°	952	1304	1563
75°	849	1360	1708
80°	724	1440	1746
85°	516	1428	1670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.5	3.1
10°-20°	264.6	8.9
20°-30°	399.7	13.5
30°-40°	481.7	16.2
40°-50°	505.7	17.1
50°-60°	473.1	16.0
60°-70°	390.7	13.2
70°-80°	266.2	9.0
80°-90°	90.8	3.1
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°	756.8	25.5
0°-40°	1238.5	41.8
0°-60°	2217.3	74.8
0°-90°	2965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2965.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	976	975	970	976	976	93
15°	933	934	934	944	946	263
25°	851	855	865	881	886	392
35°	740	748	767	793	801	462
45°	609	622	653	689	701	470
55°	467	486	529	572	589	417
65°	316	342	397	448	465	313
75°	163	201	262	311	329	174
85°	33	66	92	104	108	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	977.8	977.8	977.8	977.8	977.8
2.5°	978.8	977.8	972.9	977.8	976.8
5°	975.9	974.9	970.0	975.9	975.9
7.5°	969.0	969.0	964.1	970.9	971.9
10°	959.1	959.1	956.2	964.1	964.1
12.5°	947.3	947.3	947.3	955.2	956.2
15°	932.6	933.6	934.5	944.4	946.4
17.5°	914.9	916.8	919.8	931.6	933.6
20°	896.2	898.1	903.1	916.8	919.8
22.5°	872.6	877.5	884.4	900.1	903.1
25°	850.9	854.9	864.7	881.4	886.3
27.5°	824.4	830.3	843.1	860.8	867.7
30°	797.8	803.7	819.5	840.1	846.0
32.5°	769.3	778.1	794.9	816.5	823.4
35°	739.8	747.6	767.3	792.9	800.8
37.5°	707.3	718.1	739.8	767.3	777.1
40°	675.8	687.6	712.2	741.7	753.5
42.5°	644.3	656.2	683.7	717.1	728.9
45°	608.9	621.7	653.2	688.6	701.4
47.5°	573.5	589.3	623.7	661.1	674.8
50°	537.1	554.8	592.2	631.6	647.3
52.5°	504.7	521.4	560.7	603.0	617.8
55°	467.3	486.0	529.2	572.5	589.3
57.5°	428.9	449.6	495.8	543.0	559.7
60°	391.5	414.2	465.3	512.5	531.2
62.5°	355.1	377.8	430.9	480.1	498.8
65°	315.8	342.3	397.4	447.6	465.3
67.5°	278.4	306.9	365.0	414.2	431.9
70°	242.0	269.5	331.5	379.7	397.4
72.5°	202.6	234.1	296.1	346.3	365.0
75°	163.3	200.7	261.7	310.9	328.6
77.5°	126.9	165.3	226.3	266.6	275.4
80°	93.5	132.8	185.9	214.5	225.3
82.5°	60.0	99.4	141.7	162.3	171.2
85°	33.4	65.9	92.5	104.3	108.2
87.5°	13.8	28.5	37.4	42.3	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)