

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: P313853

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP125-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: P313853
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: 24FCZ2-35HE-UNV-L83050-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 3332.0 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

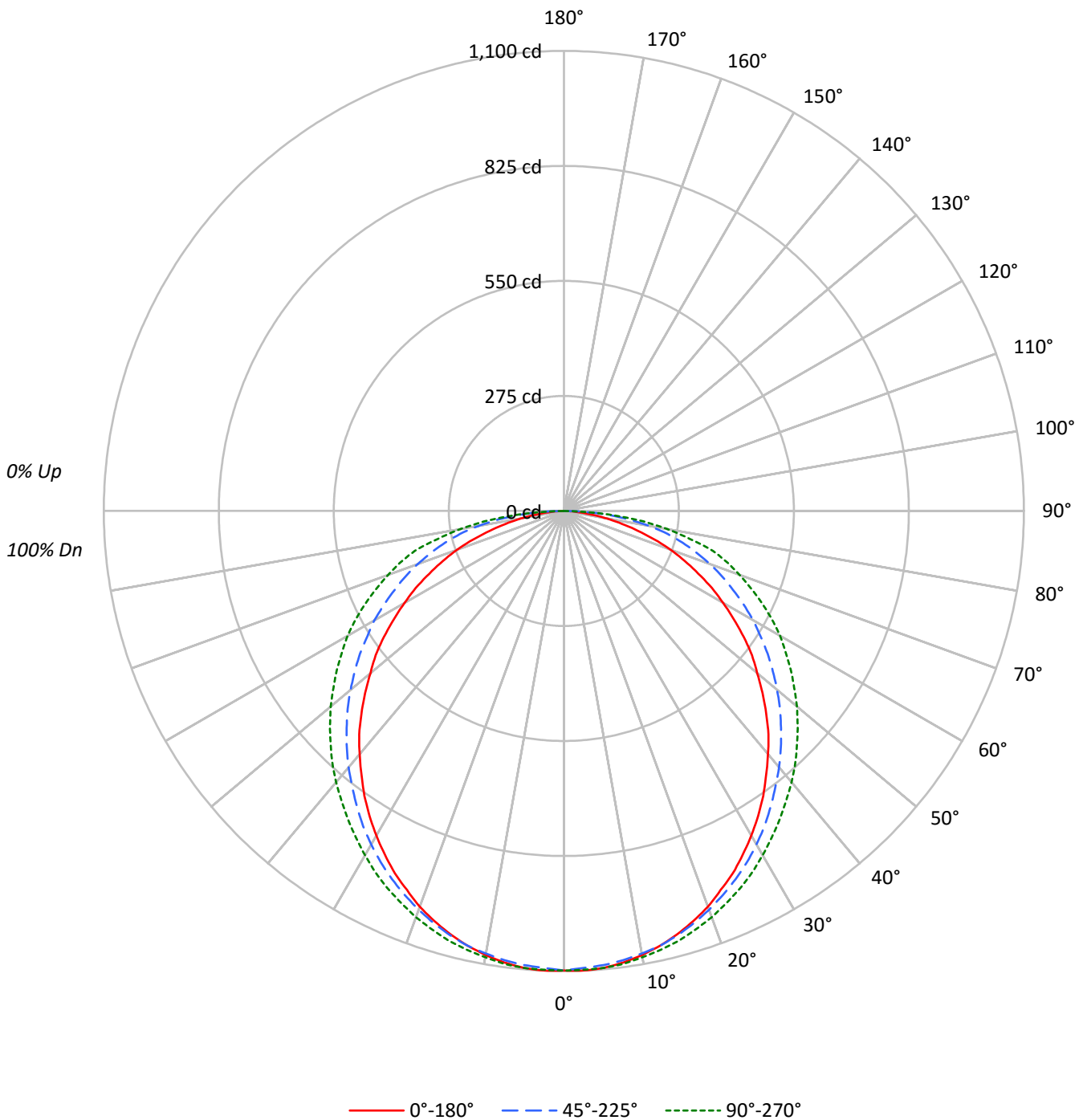
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1479	1479	1479
5°	1481	1472	1481
10°	1473	1468	1480
15°	1460	1463	1481
20°	1442	1453	1480
25°	1420	1443	1479
30°	1393	1431	1477
35°	1365	1416	1478
40°	1334	1406	1487
45°	1302	1397	1500
50°	1263	1393	1523
55°	1232	1395	1553
60°	1184	1407	1607
65°	1130	1422	1665
70°	1070	1466	1757
75°	954	1529	1919
80°	814	1619	1962
85°	580	1604	1877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.0	3.1
10°-20°	297.4	8.9
20°-30°	449.1	13.5
30°-40°	541.3	16.2
40°-50°	568.3	17.1
50°-60°	531.7	16.0
60°-70°	439.1	13.2
70°-80°	299.2	9.0
80°-90°	102.0	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°	850.5	25.5
0°-40°	1391.8	41.8
0°-60°	2491.7	74.8
0°-90°	3332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1099	1099	1099	1099	1099	
5°	1097	1096	1090	1097	1097	104
15°	1048	1049	1050	1061	1064	295
25°	956	961	972	990	996	440
35°	831	840	862	891	900	520
45°	684	699	734	774	788	528
55°	525	546	595	643	662	469
65°	355	385	447	503	523	352
75°	184	226	294	349	369	196
85°	38	74	104	117	122	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1098.9	1098.9	1098.9	1098.9	1098.9
2.5°	1100.0	1098.9	1093.3	1098.9	1097.8
5°	1096.7	1095.5	1090.0	1096.7	1096.7
7.5°	1088.9	1088.9	1083.4	1091.1	1092.2
10°	1077.9	1077.9	1074.5	1083.4	1083.4
12.5°	1064.6	1064.6	1064.6	1073.4	1074.5
15°	1048.0	1049.1	1050.2	1061.3	1063.5
17.5°	1028.1	1030.3	1033.6	1046.9	1049.1
20°	1007.1	1009.3	1014.8	1030.3	1033.6
22.5°	980.6	986.1	993.8	1011.5	1014.8
25°	956.3	960.7	971.7	990.5	996.1
27.5°	926.4	933.0	947.4	967.3	975.0
30°	896.6	903.2	920.9	944.1	950.7
32.5°	864.5	874.4	893.2	917.6	925.3
35°	831.3	840.2	862.3	891.0	899.9
37.5°	794.9	807.0	831.3	862.3	873.3
40°	759.5	772.7	800.4	833.5	846.8
42.5°	724.1	737.4	768.3	805.9	819.2
45°	684.3	698.7	734.1	773.8	788.2
47.5°	644.5	662.2	700.9	742.9	758.4
50°	603.6	623.5	665.5	709.7	727.4
52.5°	567.1	585.9	630.1	677.7	694.3
55°	525.1	546.1	594.8	643.4	662.2
57.5°	482.0	505.2	557.2	610.2	629.0
60°	440.0	465.4	522.9	576.0	597.0
62.5°	399.1	424.5	484.2	539.5	560.5
65°	354.9	384.7	446.6	503.0	522.9
67.5°	312.9	344.9	410.1	465.4	485.3
70°	272.0	302.9	372.6	426.7	446.6
72.5°	227.7	263.1	332.8	389.1	410.1
75°	183.5	225.5	294.1	349.3	369.2
77.5°	142.6	185.7	254.3	299.6	309.5
80°	105.0	149.2	208.9	241.0	253.2
82.5°	67.4	111.7	159.2	182.4	192.4
85°	37.6	74.1	103.9	117.2	121.6
87.5°	15.5	32.1	42.0	47.5	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)