

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: P311280

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P311280
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: 24FCZ2-35HE-UNV-L82765-S-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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: 3444.0 lumens
Efficiency: N/A
Efficacy: 129.0 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

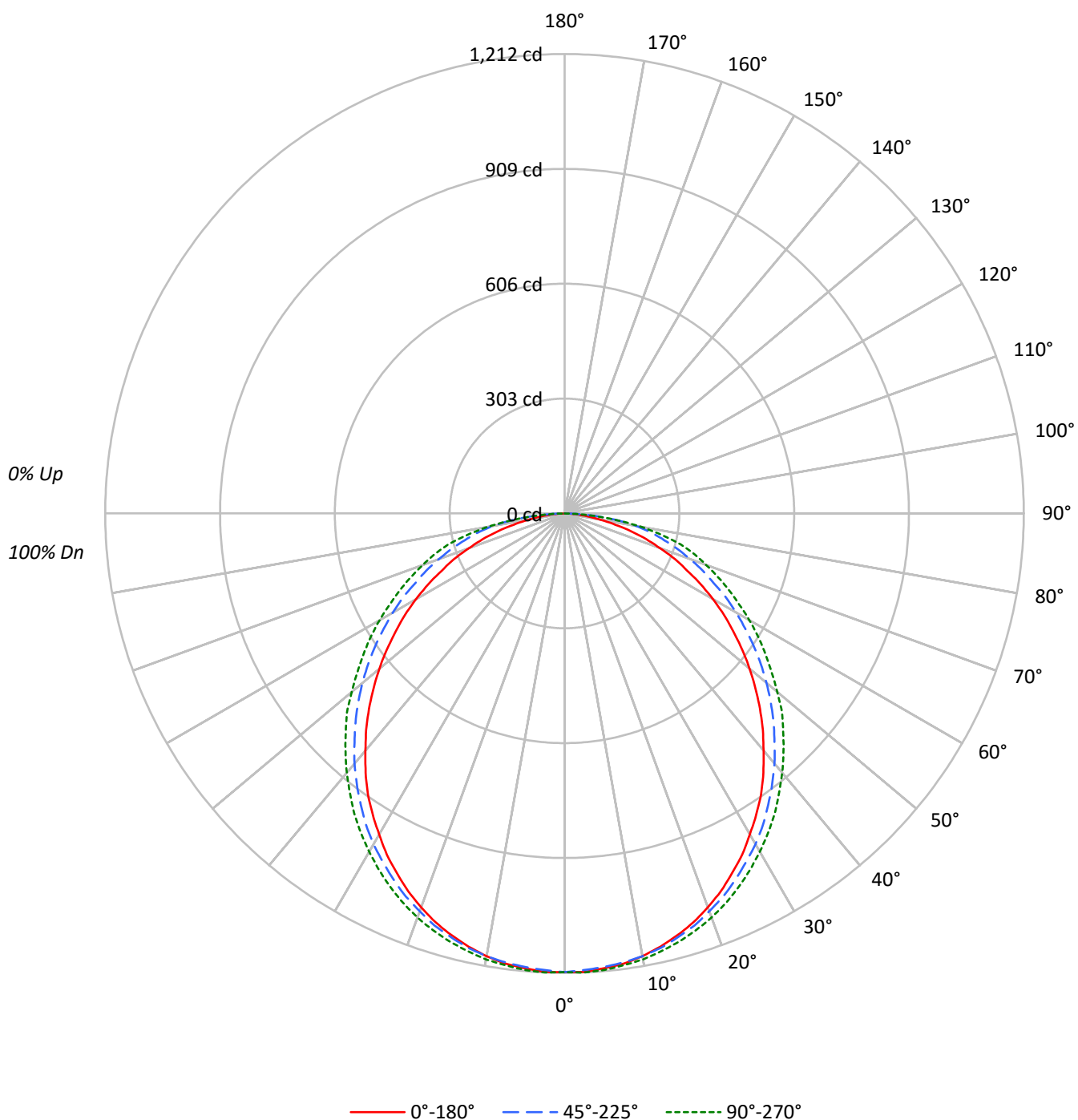
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1628	1628	1628
5°	1627	1622	1633
10°	1620	1620	1632
15°	1605	1612	1629
20°	1584	1599	1624
25°	1554	1583	1614
30°	1519	1565	1601
35°	1486	1540	1588
40°	1435	1514	1570
45°	1388	1484	1553
50°	1335	1456	1534
55°	1275	1429	1519
60°	1216	1407	1516
65°	1139	1383	1525
70°	1054	1390	1566
75°	944	1416	1655
80°	763	1500	1619
85°	574	1317	1283



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	3.3
10°-20°	327.3	9.5
20°-30°	492.0	14.3
30°-40°	586.0	17.0
40°-50°	599.8	17.4
50°-60°	540.0	15.7
60°-70°	424.1	12.3
70°-80°	275.2	8.0
80°-90°	85.1	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°	933.8	27.1
0°-40°	1519.8	44.1
0°-60°	2659.6	77.2
0°-90°	3444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1210	1210	1210	1210	1210	
5°	1204	1207	1201	1208	1209	114
15°	1152	1155	1157	1167	1169	325
25°	1047	1056	1067	1084	1087	482
35°	905	916	938	960	967	564
45°	730	747	780	810	816	563
55°	544	568	609	641	648	487
65°	358	385	434	470	479	356
75°	182	217	272	310	318	192
85°	37	69	85	83	83	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1209.9	1209.9	1209.9	1209.9	1209.9
2.5°	1211.0	1211.0	1205.5	1211.0	1212.1
5°	1204.4	1206.6	1201.1	1207.7	1208.8
7.5°	1197.9	1197.9	1194.6	1201.1	1202.2
10°	1185.8	1186.9	1185.8	1193.5	1194.6
12.5°	1170.5	1172.7	1173.8	1181.5	1182.6
15°	1151.9	1155.2	1157.4	1167.2	1169.4
17.5°	1131.1	1134.4	1139.9	1150.8	1153.0
20°	1106.0	1110.4	1116.9	1131.1	1134.4
22.5°	1078.6	1083.0	1093.9	1107.1	1112.5
25°	1046.9	1055.7	1066.6	1084.1	1087.4
27.5°	1015.2	1022.8	1037.1	1055.7	1060.0
30°	978.0	990.0	1007.5	1026.1	1030.5
32.5°	941.9	953.9	974.7	994.4	999.9
35°	904.7	915.6	937.5	960.5	967.0
37.5°	862.0	876.2	900.3	923.3	929.9
40°	817.2	834.7	862.0	886.1	893.8
42.5°	774.5	793.1	820.5	846.7	855.5
45°	729.7	747.2	780.0	809.5	816.1
47.5°	683.7	703.4	738.4	767.9	778.9
50°	637.8	658.6	695.7	726.4	732.9
52.5°	591.8	613.7	653.1	685.9	689.2
55°	543.7	567.8	609.3	641.0	647.6
57.5°	499.9	520.7	565.6	598.4	606.0
60°	451.8	474.8	522.9	553.5	563.4
62.5°	405.9	429.9	480.2	510.9	519.6
65°	357.7	385.1	434.3	470.4	479.1
67.5°	316.1	342.4	394.9	429.9	438.7
70°	268.0	297.6	353.3	389.4	398.2
72.5°	226.4	257.1	312.9	347.9	361.0
75°	181.6	216.6	272.4	309.6	318.3
77.5°	137.8	178.3	235.2	263.6	263.6
80°	98.5	141.1	193.6	206.8	208.9
82.5°	64.5	106.1	143.3	142.2	142.2
85°	37.2	68.9	85.3	83.1	83.1
87.5°	14.2	28.4	30.6	30.6	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)