

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: P311276

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP125-W2A-U-4000K**

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: P311276
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 3297.0 lumens
Efficiency: N/A
Efficacy: 125.4 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

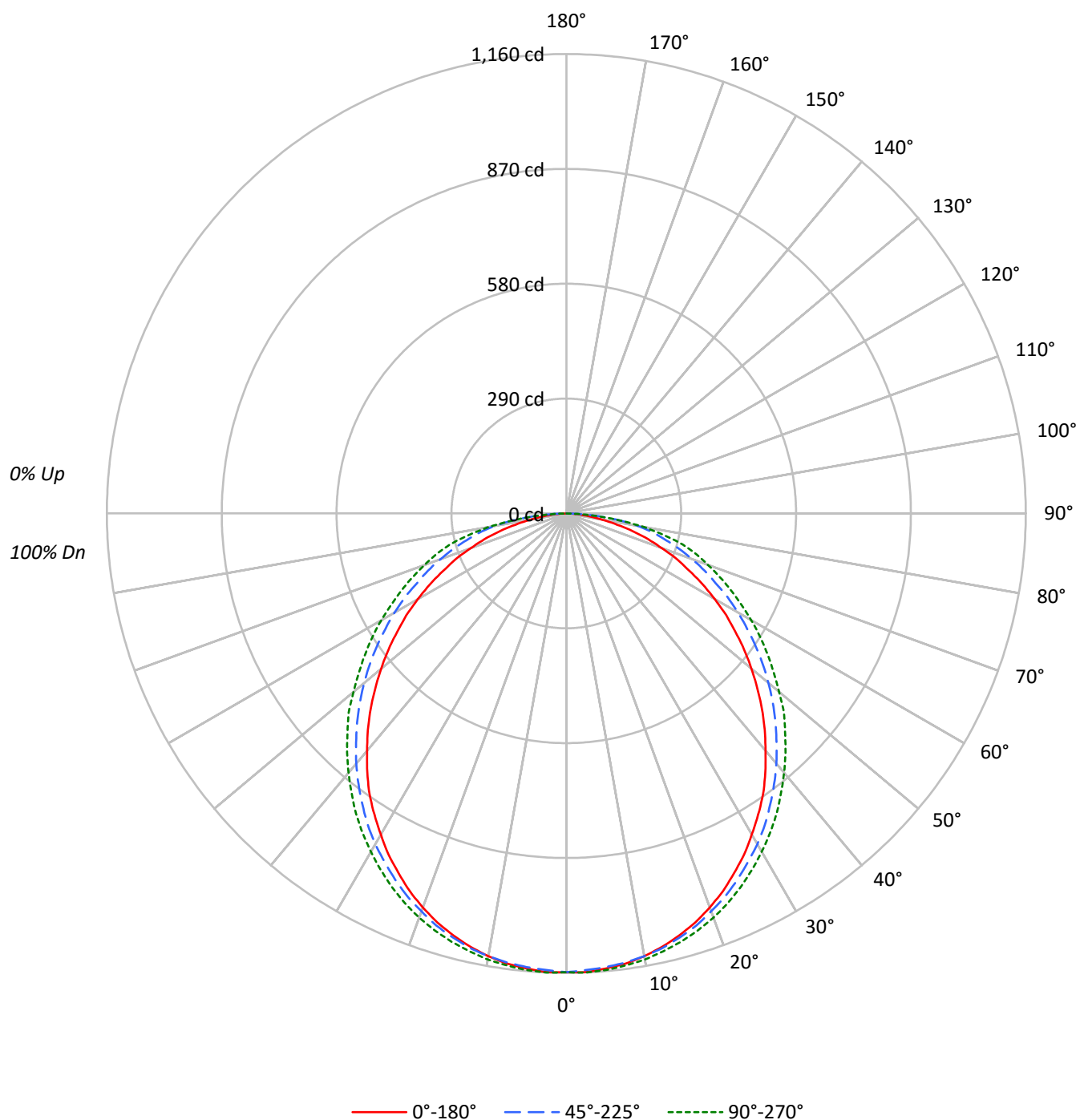
Input Watts (W): 26.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1558	1558	1558
5°	1557	1553	1563
10°	1551	1551	1562
15°	1536	1543	1559
20°	1516	1531	1555
25°	1488	1516	1545
30°	1455	1498	1533
35°	1423	1474	1521
40°	1374	1449	1503
45°	1329	1421	1486
50°	1278	1394	1469
55°	1221	1368	1454
60°	1164	1347	1451
65°	1090	1324	1460
70°	1009	1331	1500
75°	904	1356	1584
80°	731	1437	1550
85°	550	1261	1229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	3.3
10°-20°	313.3	9.5
20°-30°	471.0	14.3
30°-40°	561.0	17.0
40°-50°	574.2	17.4
50°-60°	516.9	15.7
60°-70°	406.0	12.3
70°-80°	263.5	8.0
80°-90°	81.5	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°	894.0	27.1
0°-40°	1455.0	44.1
0°-60°	2546.1	77.2
0°-90°	3297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3297.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1153	1155	1150	1156	1157	110
15°	1103	1106	1108	1117	1120	311
25°	1002	1011	1021	1038	1041	462
35°	866	876	898	920	926	540
45°	698	715	747	775	781	539
55°	520	544	583	614	620	467
65°	342	369	416	450	459	341
75°	174	207	261	296	305	184
85°	36	66	82	80	80	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1158.3	1158.3	1158.3	1158.3	1158.3
2.5°	1159.3	1159.3	1154.1	1159.3	1160.4
5°	1153.0	1155.1	1149.9	1156.2	1157.2
7.5°	1146.7	1146.7	1143.6	1149.9	1150.9
10°	1135.2	1136.3	1135.2	1142.5	1143.6
12.5°	1120.6	1122.7	1123.7	1131.0	1132.1
15°	1102.8	1105.9	1108.0	1117.4	1119.5
17.5°	1082.9	1086.0	1091.2	1101.7	1103.8
20°	1058.8	1063.0	1069.2	1082.9	1086.0
22.5°	1032.6	1036.8	1047.2	1059.8	1065.1
25°	1002.2	1010.6	1021.1	1037.8	1041.0
27.5°	971.8	979.2	992.8	1010.6	1014.8
30°	936.2	947.8	964.5	982.3	986.5
32.5°	901.7	913.2	933.1	951.9	957.2
35°	866.1	876.5	897.5	919.5	925.8
37.5°	825.2	838.8	861.9	883.9	890.2
40°	782.3	799.1	825.2	848.3	855.6
42.5°	741.5	759.3	785.4	810.6	818.9
45°	698.5	715.3	746.7	775.0	781.2
47.5°	654.5	673.4	706.9	735.2	745.6
50°	610.5	630.4	666.1	695.4	701.7
52.5°	566.6	587.5	625.2	656.6	659.8
55°	520.5	543.5	583.3	613.7	620.0
57.5°	478.6	498.5	541.4	572.8	580.2
60°	432.5	454.5	500.6	529.9	539.3
62.5°	388.5	411.6	459.7	489.1	497.4
65°	342.5	368.6	415.8	450.3	458.7
67.5°	302.7	327.8	378.1	411.6	419.9
70°	256.6	284.9	338.3	372.8	381.2
72.5°	216.8	246.1	299.5	333.0	345.6
75°	173.8	207.4	260.8	296.4	304.7
77.5°	132.0	170.7	225.2	252.4	252.4
80°	94.3	135.1	185.4	197.9	200.0
82.5°	61.8	101.6	137.2	136.1	136.1
85°	35.6	66.0	81.7	79.6	79.6
87.5°	13.6	27.2	29.3	29.3	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)