

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: P311272

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CA125-W2A-U-6500K**

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: P311272
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-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 3521.0 lumens
Efficiency: N/A
Efficacy: 129.4 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

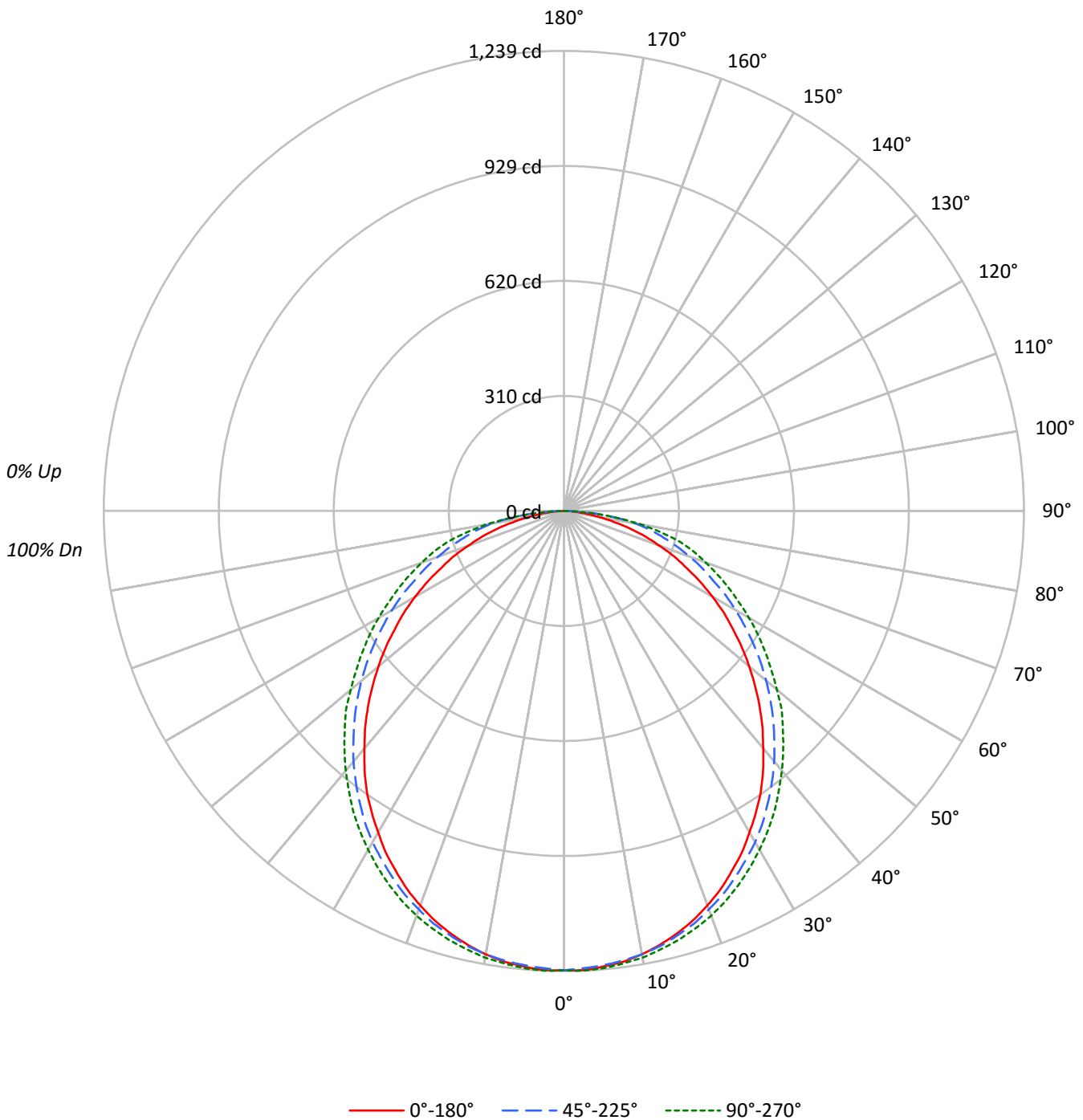
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1664	1664	1664
5°	1663	1659	1669
10°	1656	1656	1669
15°	1640	1648	1665
20°	1619	1635	1661
25°	1589	1619	1650
30°	1553	1600	1637
35°	1519	1574	1624
40°	1467	1548	1605
45°	1419	1517	1588
50°	1365	1489	1568
55°	1304	1461	1553
60°	1243	1439	1550
65°	1164	1414	1560
70°	1078	1421	1602
75°	965	1448	1692
80°	780	1534	1655
85°	587	1346	1312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	3.3
10°-20°	334.6	9.5
20°-30°	503.0	14.3
30°-40°	599.1	17.0
40°-50°	613.2	17.4
50°-60°	552.0	15.7
60°-70°	433.5	12.3
70°-80°	281.4	8.0
80°-90°	87.0	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°	954.7	27.1
0°-40°	1553.8	44.1
0°-60°	2719.0	77.2
0°-90°	3521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1237	1237	1237	1237	1237	
5°	1231	1234	1228	1235	1236	117
15°	1178	1181	1183	1193	1196	332
25°	1070	1079	1090	1108	1112	493
35°	925	936	958	982	989	577
45°	746	764	797	828	834	575
55°	556	580	623	655	662	498
65°	366	394	444	481	490	364
75°	186	221	278	316	326	196
85°	38	70	87	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1237.0	1237.0	1237.0	1237.0	1237.0
2.5°	1238.1	1238.1	1232.5	1238.1	1239.2
5°	1231.4	1233.6	1228.0	1234.7	1235.8
7.5°	1224.6	1224.6	1221.3	1228.0	1229.1
10°	1212.3	1213.5	1212.3	1220.2	1221.3
12.5°	1196.7	1198.9	1200.0	1207.9	1209.0
15°	1177.7	1181.0	1183.3	1193.3	1195.6
17.5°	1156.4	1159.8	1165.4	1176.6	1178.8
20°	1130.7	1135.2	1141.9	1156.4	1159.8
22.5°	1102.7	1107.2	1118.4	1131.8	1137.4
25°	1070.3	1079.3	1090.4	1108.3	1111.7
27.5°	1037.9	1045.7	1060.2	1079.3	1083.7
30°	999.8	1012.2	1030.0	1049.1	1053.5
32.5°	962.9	975.2	996.5	1016.6	1022.2
35°	924.9	936.1	958.5	982.0	988.7
37.5°	881.3	895.8	920.4	943.9	950.6
40°	835.4	853.3	881.3	905.9	913.7
42.5°	791.8	810.8	838.8	865.6	874.6
45°	746.0	763.9	797.4	827.6	834.3
47.5°	699.0	719.1	754.9	785.1	796.3
50°	652.0	673.3	711.3	742.6	749.3
52.5°	605.1	627.4	667.7	701.2	704.6
55°	555.8	580.4	622.9	655.4	662.1
57.5°	511.1	532.4	578.2	611.8	619.6
60°	461.9	485.4	534.6	565.9	576.0
62.5°	414.9	439.5	491.0	522.3	531.2
65°	365.7	393.7	444.0	480.9	489.9
67.5°	323.2	350.1	403.7	439.5	448.5
70°	274.0	304.2	361.2	398.2	407.1
72.5°	231.5	262.8	319.9	355.7	369.1
75°	185.7	221.4	278.5	316.5	325.5
77.5°	140.9	182.3	240.5	269.5	269.5
80°	100.7	144.3	198.0	211.4	213.6
82.5°	66.0	108.5	146.5	145.4	145.4
85°	38.0	70.5	87.2	85.0	85.0
87.5°	14.5	29.1	31.3	31.3	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)