

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: P310624

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP250-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: P310624
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-L82765-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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: 3121.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

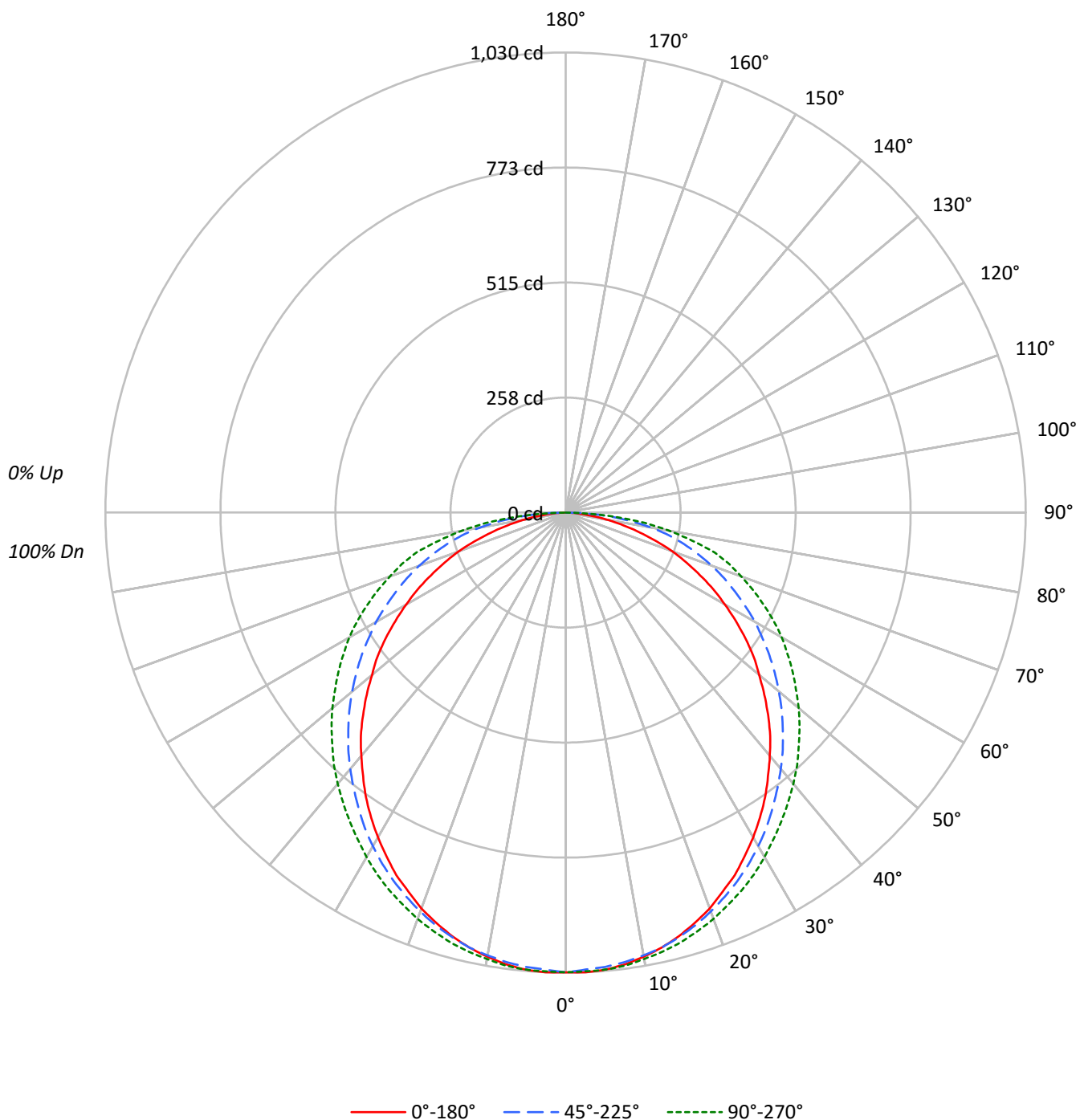
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1385	1385	1385
5°	1387	1379	1387
10°	1379	1375	1386
15°	1367	1370	1388
20°	1351	1361	1386
25°	1330	1351	1385
30°	1305	1340	1384
35°	1279	1327	1384
40°	1250	1317	1393
45°	1220	1308	1405
50°	1184	1305	1426
55°	1154	1307	1455
60°	1109	1318	1505
65°	1058	1332	1559
70°	1002	1373	1646
75°	894	1432	1798
80°	762	1516	1837
85°	543	1502	1758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	3.1
10°-20°	278.5	8.9
20°-30°	420.7	13.5
30°-40°	507.0	16.2
40°-50°	532.3	17.1
50°-60°	498.0	16.0
60°-70°	411.2	13.2
70°-80°	280.2	9.0
80°-90°	95.6	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°	796.6	25.5
0°-40°	1303.7	41.8
0°-60°	2334.0	74.8
0°-90°	3121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1029	1029	1029	1029	1029	
5°	1027	1026	1021	1027	1027	97
15°	982	983	984	994	996	277
25°	896	900	910	928	933	412
35°	779	787	808	835	843	487
45°	641	654	688	725	738	494
55°	492	512	557	603	620	439
65°	332	360	418	471	490	330
75°	172	211	275	327	346	183
85°	35	69	97	110	114	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1029.3	1029.3	1029.3	1029.3	1029.3
2.5°	1030.3	1029.3	1024.1	1029.3	1028.2
5°	1027.2	1026.2	1021.0	1027.2	1027.2
7.5°	1020.0	1020.0	1014.8	1022.0	1023.1
10°	1009.6	1009.6	1006.5	1014.8	1014.8
12.5°	997.2	997.2	997.2	1005.5	1006.5
15°	981.6	982.7	983.7	994.1	996.1
17.5°	963.0	965.1	968.2	980.6	982.7
20°	943.3	945.4	950.6	965.1	968.2
22.5°	918.5	923.7	930.9	947.5	950.6
25°	895.7	899.8	910.2	927.8	933.0
27.5°	867.7	874.0	887.4	906.1	913.3
30°	839.8	846.0	862.6	884.3	890.5
32.5°	809.8	819.1	836.7	859.5	866.7
35°	778.7	787.0	807.7	834.6	842.9
37.5°	744.5	755.9	778.7	807.7	818.0
40°	711.4	723.8	749.7	780.8	793.2
42.5°	678.2	690.7	719.7	754.9	767.3
45°	641.0	654.4	687.6	724.8	738.3
47.5°	603.7	620.3	656.5	695.9	710.3
50°	565.4	584.0	623.4	664.8	681.4
52.5°	531.2	548.8	590.2	634.8	650.3
55°	491.9	511.5	557.1	602.7	620.3
57.5°	451.5	473.2	521.9	571.6	589.2
60°	412.1	435.9	489.8	539.5	559.2
62.5°	373.8	397.6	453.5	505.3	525.0
65°	332.4	360.4	418.3	471.1	489.8
67.5°	293.0	323.1	384.2	435.9	454.6
70°	254.7	283.7	349.0	399.7	418.3
72.5°	213.3	246.4	311.7	364.5	384.2
75°	171.9	211.2	275.4	327.2	345.9
77.5°	133.6	174.0	238.2	280.6	289.9
80°	98.4	139.8	195.7	225.7	237.1
82.5°	63.2	104.6	149.1	170.9	180.2
85°	35.2	69.4	97.3	109.8	113.9
87.5°	14.5	30.0	39.3	44.5	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)