

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: P310097

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CA125-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: P310097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2743.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

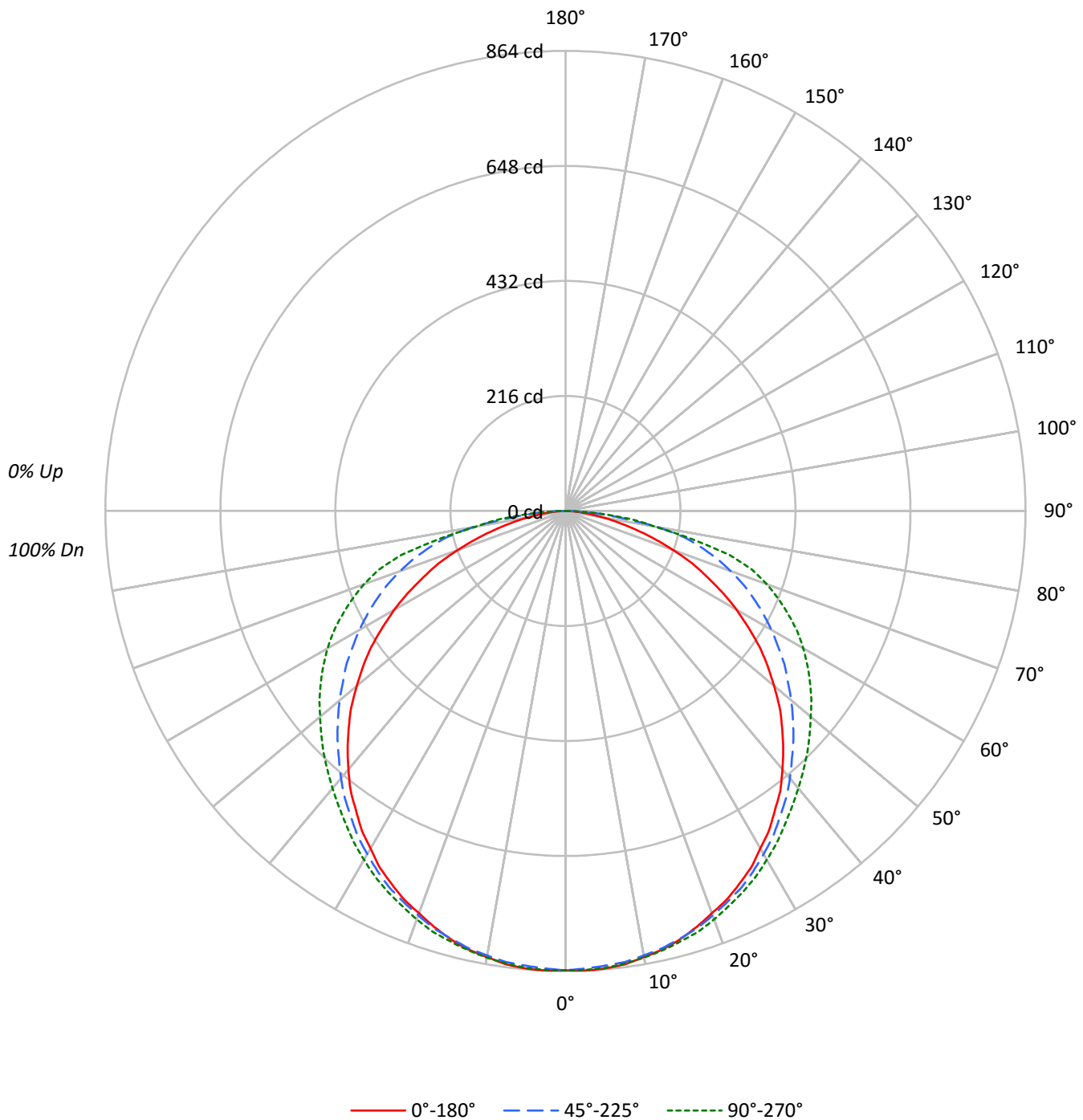
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1161	1161	1161
5°	1165	1158	1163
10°	1162	1158	1164
15°	1160	1158	1165
20°	1151	1157	1169
25°	1147	1159	1171
30°	1137	1156	1175
35°	1126	1153	1180
40°	1114	1152	1195
45°	1095	1152	1222
50°	1071	1159	1259
55°	1044	1178	1315
60°	999	1201	1388
65°	936	1243	1473
70°	851	1301	1584
75°	722	1372	1655
80°	570	1381	1339
85°	420	1050	1176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	3.0
10°-20°	235.5	8.6
20°-30°	360.1	13.1
30°-40°	440.2	16.0
40°-50°	469.2	17.1
50°-60°	448.6	16.4
60°-70°	380.0	13.9
70°-80°	255.4	9.3
80°-90°	72.0	2.6
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°	677.4	24.7
0°-40°	1117.7	40.7
0°-60°	2035.5	74.2
0°-90°	2743.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2743.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	863	861	857	861	861	82
15°	833	833	831	838	837	235
25°	773	776	781	788	789	356
35°	686	691	702	716	718	430
45°	576	585	605	631	642	444
55°	445	461	502	542	561	396
65°	294	324	390	442	463	292
75°	139	189	264	309	318	149
85°	27	56	68	74	76	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.6	862.6	862.6	862.6	862.6
2.5°	864.0	864.0	859.9	862.6	862.6
5°	862.6	861.2	857.2	861.2	861.2
7.5°	858.5	857.2	854.4	858.5	857.2
10°	850.4	850.4	847.6	851.7	851.7
12.5°	843.5	842.2	840.8	846.3	844.9
15°	832.7	832.7	831.3	838.1	836.7
17.5°	819.1	820.4	821.8	827.2	828.6
20°	804.1	806.8	808.2	816.3	816.3
22.5°	790.5	791.8	794.6	802.7	802.7
25°	772.8	775.5	781.0	787.8	789.1
27.5°	755.1	756.5	763.3	772.8	774.2
30°	732.0	736.1	744.2	755.1	756.5
32.5°	711.6	715.7	725.2	736.1	738.8
35°	685.7	691.2	702.0	715.7	718.4
37.5°	662.6	666.7	680.3	695.2	699.3
40°	634.0	642.2	655.8	673.5	680.3
42.5°	605.4	613.6	629.9	653.1	661.2
45°	575.5	585.0	605.4	631.3	642.2
47.5°	545.6	556.5	579.6	609.5	621.8
50°	511.6	525.2	553.7	587.8	601.4
52.5°	478.9	495.2	526.5	564.6	582.3
55°	444.9	461.2	502.0	541.5	560.6
57.5°	406.8	428.6	473.5	518.4	538.8
60°	371.4	391.8	446.3	495.2	515.7
62.5°	333.3	360.5	419.1	470.8	491.2
65°	293.9	323.8	390.5	442.2	462.6
67.5°	258.5	291.2	361.9	413.6	434.0
70°	216.3	257.1	330.6	382.3	402.7
72.5°	176.9	221.8	298.0	348.3	367.4
75°	138.8	189.1	263.9	308.8	318.4
77.5°	103.4	156.5	228.6	247.6	240.8
80°	73.5	125.2	178.2	168.7	172.8
82.5°	47.6	95.2	110.2	125.2	129.3
85°	27.2	55.8	68.0	73.5	76.2
87.5°	12.2	20.4	27.2	27.2	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)