

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: P309354

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP187-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: P309354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-HRP-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 2756.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

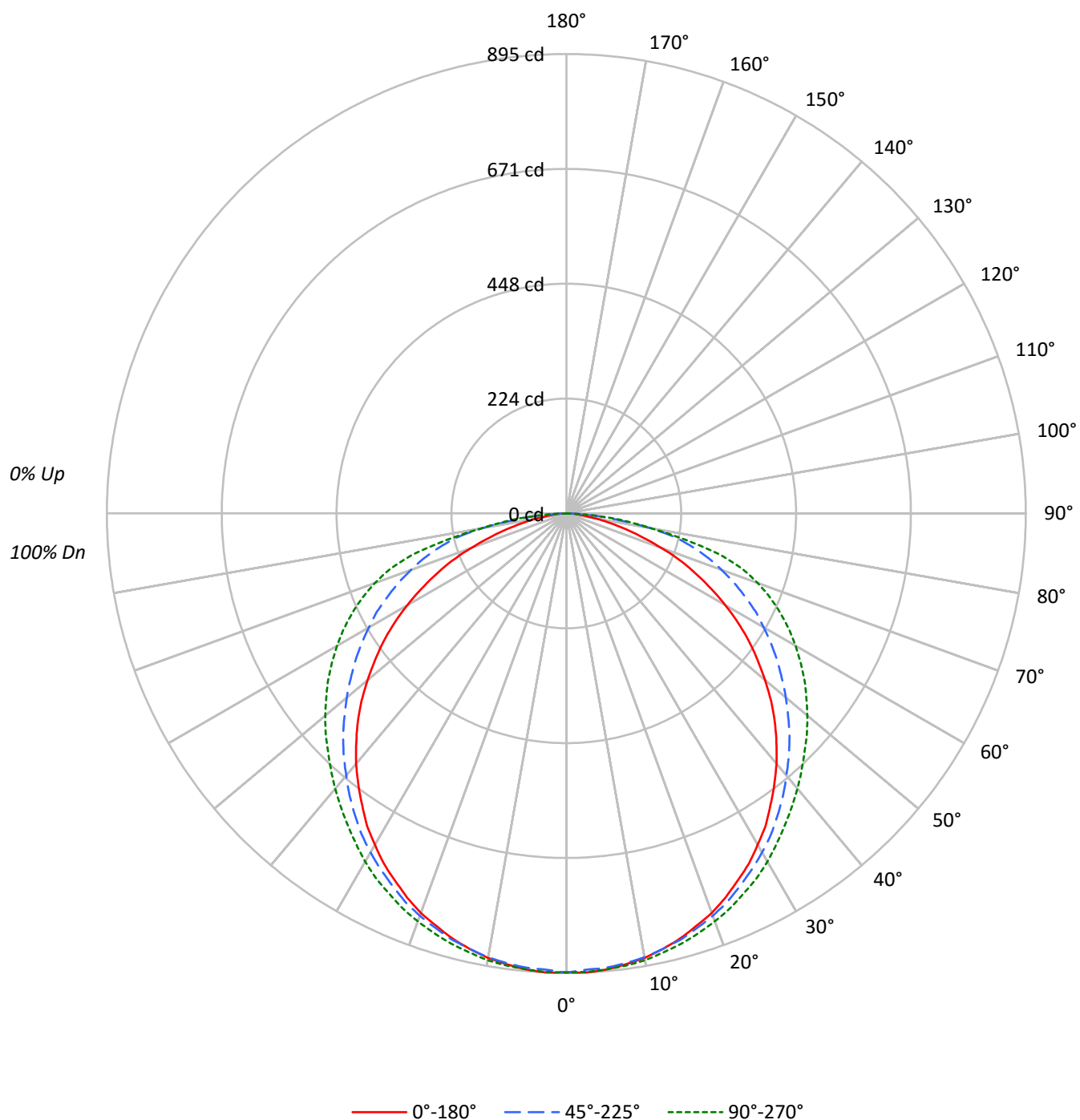
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1203	1203	1203
5°	1205	1200	1205
10°	1201	1200	1207
15°	1194	1197	1209
20°	1186	1194	1211
25°	1172	1189	1213
30°	1158	1185	1217
35°	1139	1179	1219
40°	1119	1171	1230
45°	1093	1170	1249
50°	1058	1169	1283
55°	1020	1177	1329
60°	963	1195	1388
65°	889	1223	1466
70°	776	1266	1561
75°	630	1331	1614
80°	465	1306	1306
85°	357	962	1087



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	3.1
10°-20°	243.2	8.8
20°-30°	370.3	13.4
30°-40°	449.6	16.3
40°-50°	475.0	17.2
50°-60°	448.3	16.3
60°-70°	372.7	13.5
70°-80°	245.2	8.9
80°-90°	66.8	2.4
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°	698.3	25.3
0°-40°	1147.9	41.7
0°-60°	2071.2	75.2
0°-90°	2756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	892	892	888	892	892	85
15°	857	858	860	868	868	242
25°	789	794	801	815	817	364
35°	693	702	718	736	742	434
45°	575	586	615	645	656	442
55°	435	453	502	549	566	387
65°	279	312	384	441	460	276
75°	121	176	256	303	310	131
85°	23	51	62	69	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.2	894.2	894.2	894.2	894.2
2.5°	895.3	894.2	889.6	894.2	894.2
5°	891.9	891.9	888.4	891.9	891.9
7.5°	886.1	886.1	883.8	888.4	888.4
10°	879.2	879.2	878.0	883.8	883.8
12.5°	868.8	870.0	868.8	875.7	875.7
15°	857.3	858.4	859.6	867.6	867.6
17.5°	842.3	844.6	846.9	856.1	857.3
20°	828.4	829.6	834.2	844.6	845.7
22.5°	810.0	813.4	819.2	829.6	833.0
25°	789.2	793.8	800.7	814.6	816.9
27.5°	769.6	773.0	782.3	797.3	801.9
30°	745.3	751.1	762.7	777.7	783.4
32.5°	722.3	728.0	741.9	758.0	762.7
35°	693.4	701.5	717.7	736.1	741.9
37.5°	665.7	673.8	693.4	714.2	721.1
40°	636.9	646.1	666.9	691.1	700.3
42.5°	605.7	618.4	641.5	668.0	678.4
45°	574.6	586.1	615.0	645.0	656.5
47.5°	541.1	555.0	586.1	621.9	635.7
50°	505.4	522.7	558.4	597.7	612.7
52.5°	469.6	489.2	529.6	573.4	589.6
55°	435.0	453.4	501.9	549.2	566.5
57.5°	396.9	420.0	473.1	523.8	541.1
60°	357.7	383.1	444.2	497.3	515.7
62.5°	318.4	347.3	416.5	469.6	489.2
65°	279.2	311.5	384.2	440.7	460.4
67.5°	241.1	276.9	354.2	410.7	430.4
70°	197.3	242.3	321.9	377.3	396.9
72.5°	156.9	208.8	290.8	342.7	360.0
75°	121.1	176.5	256.1	303.4	310.4
77.5°	88.8	144.2	220.4	236.5	237.7
80°	60.0	115.4	168.5	166.1	168.5
82.5°	39.2	86.5	106.1	118.8	120.0
85°	23.1	50.8	62.3	69.2	70.4
87.5°	11.5	17.3	21.9	23.1	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)