

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: P309734

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-W2A-U-2700K**

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: P309734
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: 24FCZ2-70HE-UNV-L82765-HRP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 4471.0 lumens
Efficiency: N/A
Efficacy: 77.5 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

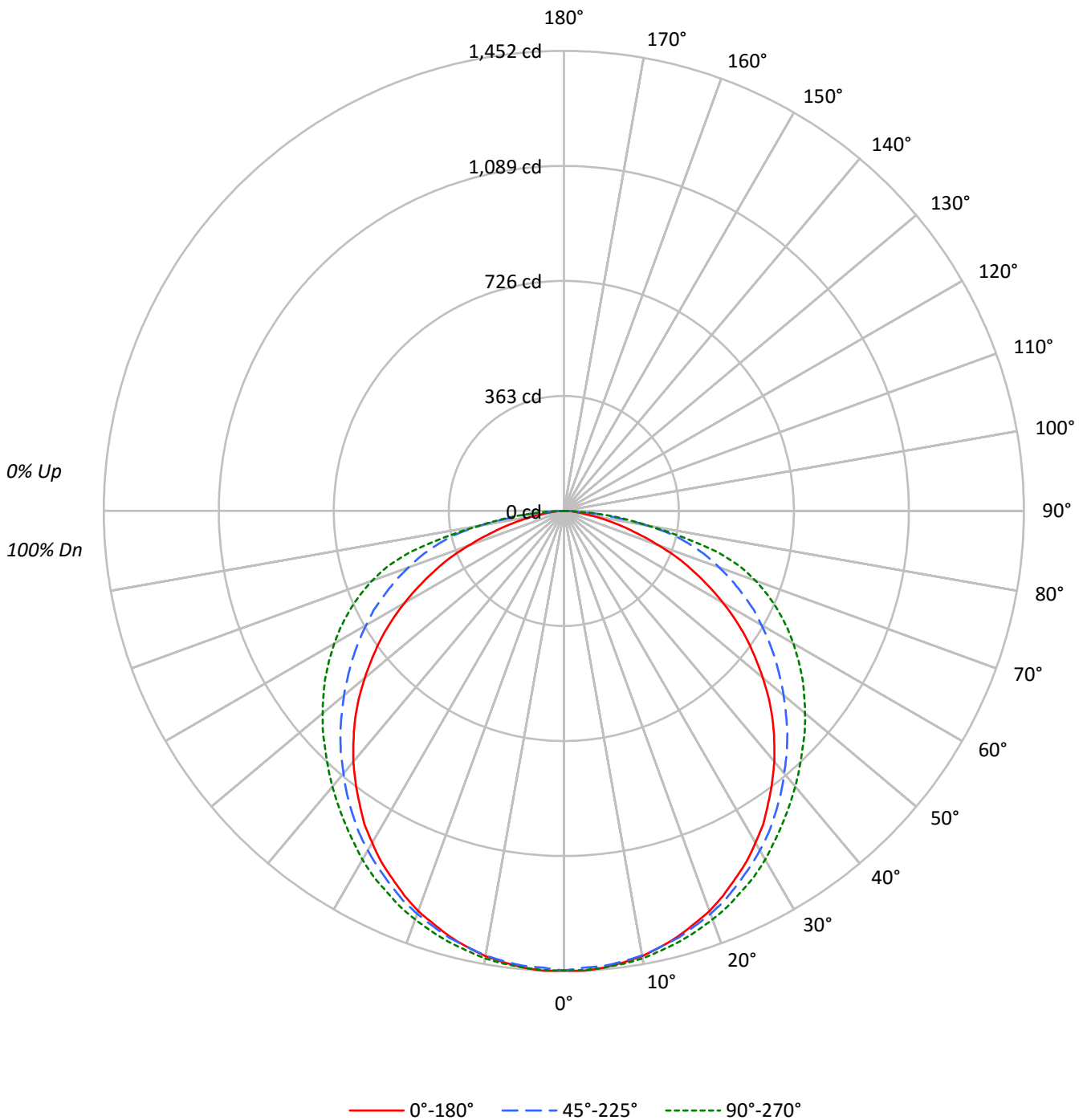
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1952	1952	1952
5°	1954	1947	1954
10°	1949	1946	1959
15°	1937	1942	1961
20°	1924	1938	1964
25°	1901	1928	1967
30°	1879	1922	1975
35°	1848	1912	1977
40°	1815	1900	1996
45°	1774	1898	2026
50°	1716	1896	2080
55°	1655	1910	2156
60°	1561	1939	2252
65°	1442	1984	2378
70°	1259	2054	2533
75°	1022	2160	2617
80°	754	2118	2118
85°	577	1561	1763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.4	3.1
10°-20°	394.6	8.8
20°-30°	600.8	13.4
30°-40°	729.5	16.3
40°-50°	770.7	17.2
50°-60°	727.2	16.3
60°-70°	604.6	13.5
70°-80°	397.8	8.9
80°-90°	108.4	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°	1132.8	25.3
0°-40°	1862.2	41.7
0°-60°	3360.1	75.2
0°-90°	4471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1451	1451	1451	1451	1451	
5°	1447	1447	1441	1447	1447	137
15°	1391	1393	1394	1408	1408	392
25°	1280	1288	1299	1322	1325	591
35°	1125	1138	1164	1194	1204	704
45°	932	951	998	1046	1065	718
55°	706	736	814	891	919	629
65°	453	505	623	715	747	448
75°	196	286	416	492	504	212
85°	37	82	101	112	114	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1450.6	1450.6	1450.6	1450.6	1450.6
2.5°	1452.5	1450.6	1443.1	1450.6	1450.6
5°	1446.9	1446.9	1441.3	1446.9	1446.9
7.5°	1437.5	1437.5	1433.8	1441.3	1441.3
10°	1426.3	1426.3	1424.4	1433.8	1433.8
12.5°	1409.4	1411.3	1409.4	1420.7	1420.7
15°	1390.7	1392.6	1394.5	1407.6	1407.6
17.5°	1366.4	1370.1	1373.9	1388.9	1390.7
20°	1343.9	1345.8	1353.3	1370.1	1372.0
22.5°	1314.0	1319.6	1329.0	1345.8	1351.4
25°	1280.3	1287.8	1299.0	1321.5	1325.2
27.5°	1248.5	1254.1	1269.1	1293.4	1300.9
30°	1209.2	1218.5	1237.2	1261.6	1270.9
32.5°	1171.7	1181.1	1203.5	1229.8	1237.2
35°	1124.9	1138.0	1164.2	1194.2	1203.5
37.5°	1080.0	1093.1	1124.9	1158.6	1169.9
40°	1033.2	1048.2	1081.9	1121.2	1136.2
42.5°	982.7	1003.3	1040.7	1083.8	1100.6
45°	932.1	950.9	997.7	1046.3	1065.0
47.5°	877.9	900.3	950.9	1008.9	1031.3
50°	819.8	847.9	905.9	969.6	993.9
52.5°	761.8	793.6	859.1	930.3	956.5
55°	705.7	735.6	814.2	891.0	919.0
57.5°	643.9	681.3	767.4	849.8	877.9
60°	580.2	621.4	720.6	806.7	836.7
62.5°	516.6	563.4	675.7	761.8	793.6
65°	453.0	505.4	623.3	715.0	746.8
67.5°	391.2	449.2	574.6	666.3	698.2
70°	320.1	393.1	522.2	612.1	643.9
72.5°	254.6	338.8	471.7	555.9	584.0
75°	196.5	286.4	415.5	492.3	503.5
77.5°	144.1	234.0	357.5	383.7	385.6
80°	97.3	187.2	273.3	269.5	273.3
82.5°	63.6	140.4	172.2	192.8	194.7
85°	37.4	82.4	101.1	112.3	114.2
87.5°	18.7	28.1	35.6	37.4	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)