

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: P309770

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-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: P309770
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: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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: 4797.0 lumens
Efficiency: N/A
Efficacy: 76.4 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

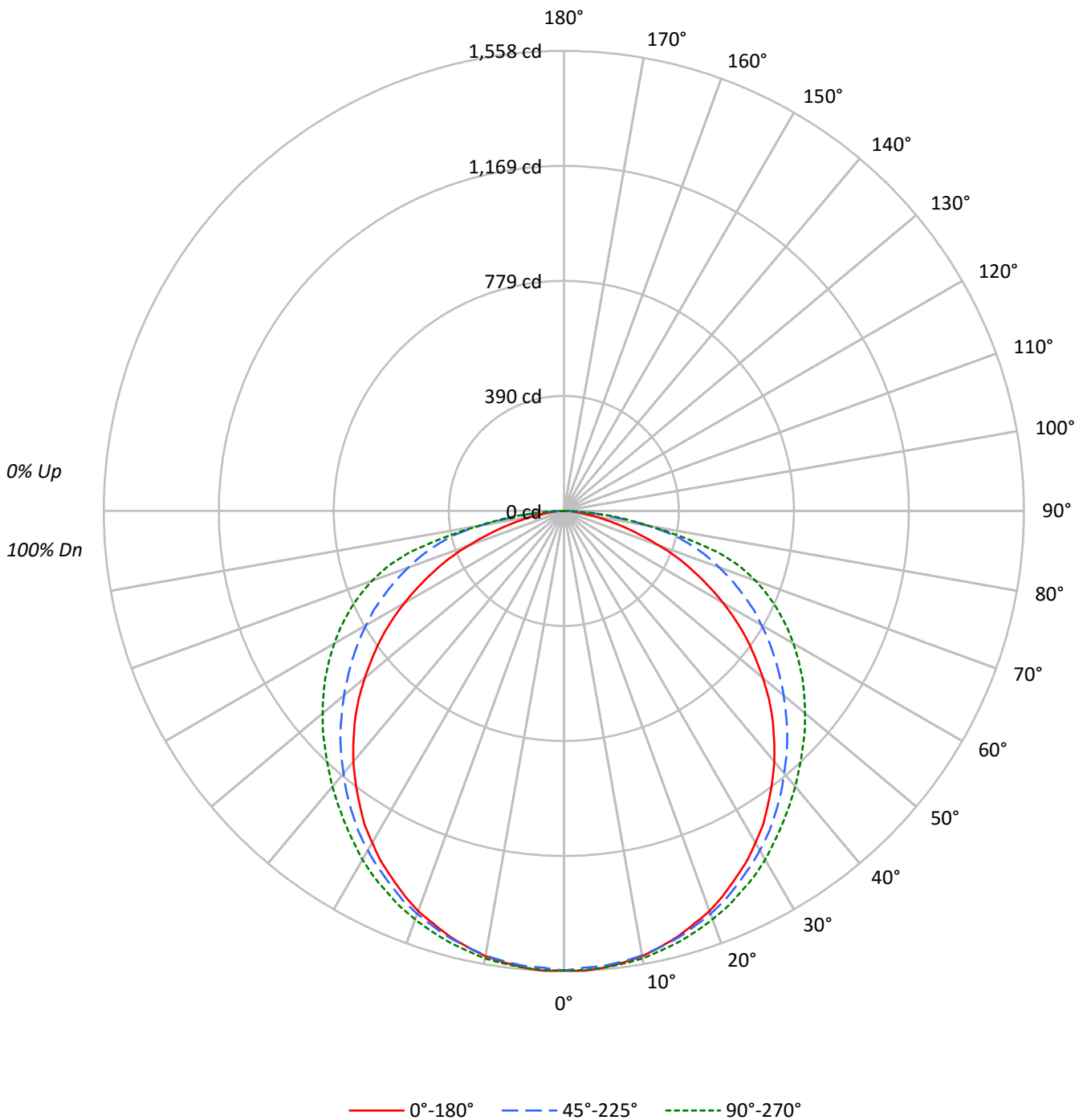
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2094	2094	2094
5°	2097	2088	2097
10°	2091	2088	2102
15°	2078	2084	2104
20°	2065	2079	2108
25°	2039	2069	2111
30°	2016	2062	2119
35°	1983	2052	2121
40°	1947	2039	2141
45°	1903	2037	2174
50°	1841	2035	2232
55°	1776	2049	2313
60°	1675	2081	2416
65°	1547	2129	2551
70°	1351	2204	2718
75°	1096	2318	2808
80°	809	2272	2272
85°	621	1673	1891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.4	3.1
10°-20°	423.4	8.8
20°-30°	644.6	13.4
30°-40°	782.7	16.3
40°-50°	826.9	17.2
50°-60°	780.2	16.3
60°-70°	648.7	13.5
70°-80°	426.8	8.9
80°-90°	116.3	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°	1215.4	25.3
0°-40°	1998.0	41.7
0°-60°	3605.1	75.2
0°-90°	4797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1552	1552	1546	1552	1552	147
15°	1492	1494	1496	1510	1510	421
25°	1374	1382	1394	1418	1422	634
35°	1207	1221	1249	1281	1291	756
45°	1000	1020	1070	1123	1143	770
55°	757	789	874	956	986	674
65°	486	542	669	767	801	480
75°	211	307	446	528	540	227
85°	40	88	108	120	122	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1556.4	1556.4	1556.4	1556.4	1556.4
2.5°	1558.4	1556.4	1548.4	1556.4	1556.4
5°	1552.4	1552.4	1546.3	1552.4	1552.4
7.5°	1542.3	1542.3	1538.3	1546.3	1546.3
10°	1530.3	1530.3	1528.3	1538.3	1538.3
12.5°	1512.2	1514.2	1512.2	1524.3	1524.3
15°	1492.1	1494.1	1496.1	1510.2	1510.2
17.5°	1466.0	1470.0	1474.1	1490.1	1492.1
20°	1441.9	1443.9	1452.0	1470.0	1472.0
22.5°	1409.8	1415.8	1425.9	1443.9	1450.0
25°	1373.6	1381.7	1393.7	1417.8	1421.8
27.5°	1339.5	1345.5	1361.6	1387.7	1395.7
30°	1297.3	1307.4	1327.5	1353.6	1363.6
32.5°	1257.2	1267.2	1291.3	1319.4	1327.5
35°	1207.0	1221.0	1249.1	1281.3	1291.3
37.5°	1158.8	1172.8	1207.0	1243.1	1255.2
40°	1108.6	1124.6	1160.8	1202.9	1219.0
42.5°	1054.3	1076.4	1116.6	1162.8	1180.8
45°	1000.1	1020.2	1070.4	1122.6	1142.7
47.5°	941.9	966.0	1020.2	1082.4	1106.5
50°	879.6	909.7	972.0	1040.3	1066.4
52.5°	817.4	851.5	921.8	998.1	1026.2
55°	757.1	789.2	873.6	955.9	986.0
57.5°	690.8	731.0	823.4	911.7	941.9
60°	622.6	666.7	773.2	865.6	897.7
62.5°	554.3	604.5	725.0	817.4	851.5
65°	486.0	542.2	668.7	767.1	801.3
67.5°	419.7	482.0	616.5	714.9	749.1
70°	343.4	421.7	560.3	656.7	690.8
72.5°	273.1	363.5	506.1	596.4	626.6
75°	210.9	307.3	445.8	528.2	540.2
77.5°	154.6	251.0	383.6	411.7	413.7
80°	104.4	200.8	293.2	289.2	293.2
82.5°	68.3	150.6	184.8	206.8	208.9
85°	40.2	88.4	108.4	120.5	122.5
87.5°	20.1	30.1	38.2	40.2	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)