

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 15723

Luminaire Tested: **701IP-S-P-3-T5**

Issue Date: 3/3/2020

**Test Information**

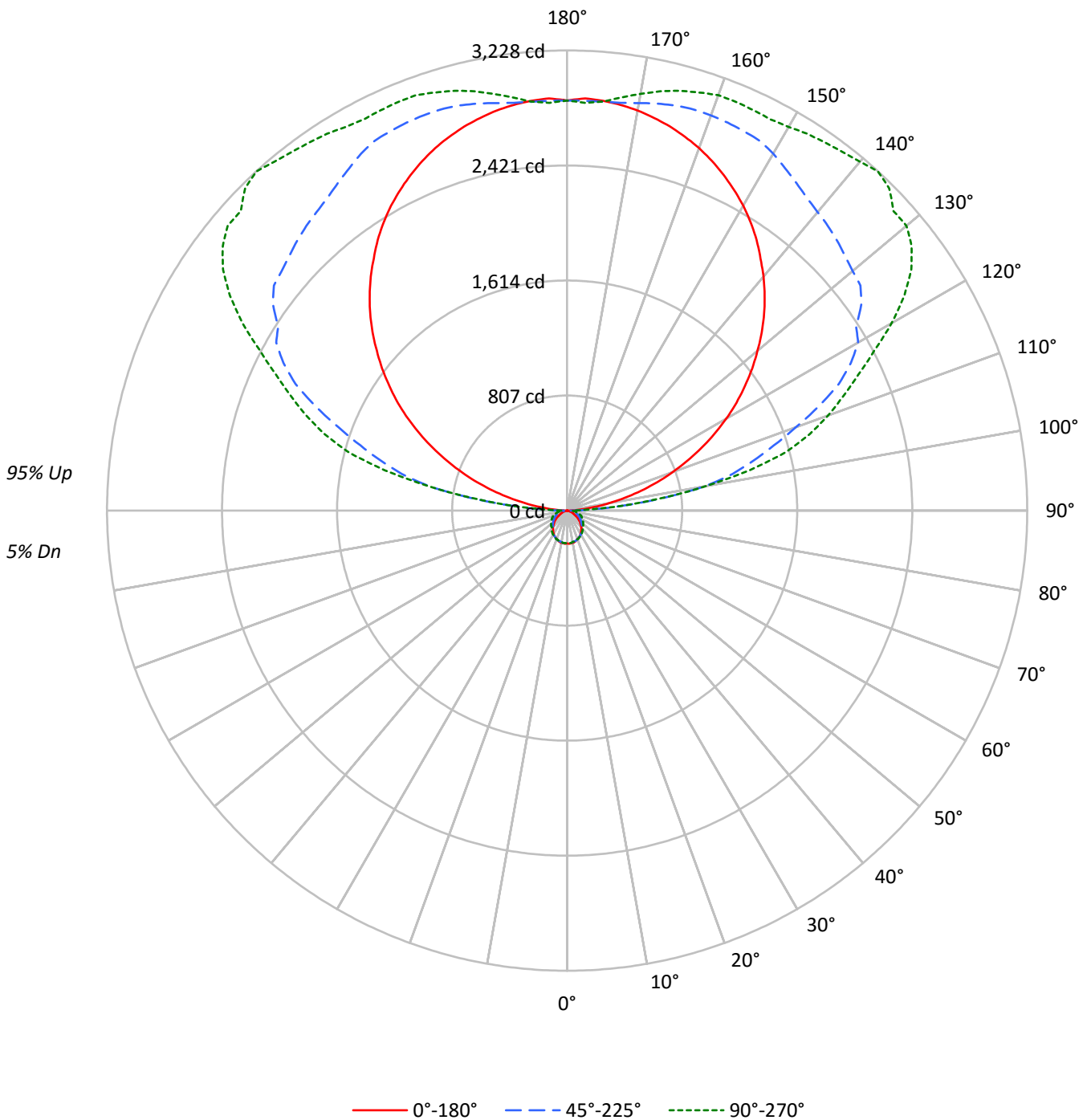
Test Method: LM-41-14  
Report Number: 15723  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: 701IP-S-P-3-T5  
Description: NEORAY 3 LAMP T5 DIRECT/INDIRECT LUMINAIRE - NIMBUS II PERF  
WITH WHITE INTERIOR, SPECULAR REFLECTORS AND WHITE LENS OVER PERFORATIONS  
Light Source: THREE SYLVANIA 54 WATT T5 LAMPS  
  
FP54/841/HO. LUMEN RATING = 4500 LMS.  
  
Ballast/Driver: ONE SYL. QT1 AND ONE QT2X54/120PHO BALLAST OPERATING AT 120 VAC AND  
180 WATTS

**Summary**

Lumens per Lamp: 4500 (3 lamps)  
Luminaire Lumens: 12598.0 lumens  
Efficiency: 93.3%  
Efficacy: 70.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.28 / 1.33  
Luminous Opening: Rectangular w/ Sides (W: 0.75' x L: 4' x H: 0.25')  
CIE Type: Indirect  
  
Input Watts (W): 180  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	90	90	90	90	78	78	78	78	55	55	55	34	34	34	14	14	14	5
1	82	78	75	72	70	67	65	62	47	46	44	29	28	27	12	12	12	4
2	74	68	63	58	64	59	54	51	41	39	36	26	24	23	11	10	10	3
3	68	60	53	48	58	52	46	42	36	33	31	22	21	19	9	9	8	3
4	62	53	46	41	53	46	40	36	32	29	26	20	18	16	8	8	7	2
5	57	47	40	34	48	40	35	30	29	25	22	18	16	14	8	7	6	2
6	52	41	34	29	44	36	30	26	26	22	19	16	14	12	7	6	5	2
7	48	37	30	25	41	32	26	22	23	19	16	14	12	10	6	5	5	2
8	44	33	27	22	38	29	23	20	21	17	14	13	11	9	6	5	4	1
9	41	30	24	19	35	26	21	17	19	15	13	12	10	8	5	4	4	1
10	38	28	21	17	33	24	19	15	17	14	11	11	9	7	5	4	3	1

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	825	825	825
5°	833	804	796
10°	829	782	766
15°	817	765	747
20°	794	741	728
25°	780	710	703
30°	753	688	680
35°	722	657	651
40°	694	611	626
45°	632	584	599
50°	586	540	589
55°	520	521	578
60°	418	496	570
65°	335	473	565
70°	279	457	557
75°	199	413	528
80°	79	357	471
85°	12	306	448



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	21.8	0.2	0.2
10°-20°	62.4	0.5	0.5
20°-30°	93.6	0.7	0.7
30°-40°	111.2	0.9	0.8
40°-50°	112.2	0.9	0.8
50°-60°	102.6	0.8	0.8
60°-70°	84.2	0.7	0.6
70°-80°	59.4	0.5	0.4
80°-90°	31.3	0.2	0.2
90°-100°	404.8	3.2	3.0
100°-110°	1303.6	10.3	9.7
110°-120°	1860.2	14.8	13.8
120°-130°	2119.5	16.8	15.7
130°-140°	2043.4	16.2	15.1
140°-150°	1747.1	13.9	12.9
150°-160°	1336.4	10.6	9.9
160°-170°	828.5	6.6	6.1
170°-180°	275.8	2.2	2.0
0°-30°	177.7	1.4	1.3
0°-40°	288.9	2.3	2.1
0°-60°	503.8	4.0	3.7
0°-90°	678.7	5.4	5.0
90°-120°	3568.6	28.3	26.4
90°-150°	9478.6	75.2	70.2
90°-180°	11919.0	94.6	88.3
0°-180°	12598.0	100.0	93.3

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	230	230	230	230	230	
5°	232	229	229	228	227	22
15°	224	220	221	220	219	63
25°	203	200	203	205	205	93
35°	172	174	180	186	183	107
45°	132	136	147	156	157	103
55°	90	98	116	131	136	79
65°	45	62	89	108	114	46
75°	18	32	61	79	86	19
85°	0	11	31	46	52	1
90°	0	4	21	31	36	5
95°	103	374	391	369	380	125
105°	536	1104	1352	1526	1592	569
115°	1039	1569	2102	2216	2252	1027
125°	1522	1883	2519	2834	2947	1360
135°	1954	2275	2678	3098	3196	1506
145°	2317	2566	2804	3045	3152	1448
155°	2598	2735	2936	3052	3098	1198
165°	2789	2831	2942	3015	3049	787
175°	2886	2886	2878	2876	2879	274
180°	2876	2876	2876	2876	2876	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	230.0	230.0	230.0	230.0	230.0
2.5°	232.5	228.8	229.8	228.8	228.8
5°	232.5	228.8	228.8	227.8	227.4
7.5°	229.8	228.8	228.8	227.8	228.8
10°	230.1	225.1	225.1	223.7	222.7
12.5°	227.4	223.7	221.4	226.4	222.7
15°	223.7	220.3	221.4	220.3	219.0
17.5°	216.3	216.6	217.6	220.3	217.6
20°	212.6	211.6	213.9	216.6	213.9
22.5°	206.5	205.2	208.9	208.9	211.6
25°	202.8	200.4	202.8	205.2	205.2
27.5°	196.7	192.0	197.7	199.1	201.5
30°	188.3	189.3	193.0	196.7	195.7
32.5°	180.9	179.5	184.6	187.0	192.0
35°	172.1	173.5	179.5	185.9	183.2
37.5°	161.0	162.3	172.1	174.5	177.2
40°	155.9	156.3	161.0	167.1	171.1
42.5°	144.8	146.2	148.5	163.7	159.6
45°	132.3	136.4	147.2	156.3	157.3
47.5°	122.6	126.3	135.0	147.5	152.2
50°	112.8	116.5	129.0	143.5	147.5
52.5°	100.3	107.7	123.9	138.7	141.4
55°	90.5	97.9	116.5	131.3	136.4
57.5°	74.3	89.2	109.1	126.3	131.3
60°	64.6	80.7	102.7	117.8	125.3
62.5°	54.8	72.0	97.9	112.8	119.2
65°	44.7	62.2	89.2	107.7	114.1
67.5°	37.3	54.8	83.1	100.3	109.1
70°	31.2	48.4	77.0	94.2	101.7
72.5°	23.8	41.0	65.9	86.8	95.6
75°	17.7	32.5	60.9	79.4	85.5
77.5°	12.6	26.1	53.4	72.0	76.7
80°	5.2	22.4	44.7	63.6	65.9
82.5°	0.5	17.4	37.3	54.8	59.5
85°	0.5	11.3	31.2	46.0	52.4
87.5°	0.5	4.2	21.1	37.3	42.3
90°	0.5	4.5	21.1	31.2	35.9
92.5°	32.5	132.7	140.1	112.8	121.5
95°	102.7	374.4	390.6	368.7	379.5
97.5°	190.7	567.3	688.3	663.4	672.2
100°	299.2	766.2	977.3	1066.3	992.1
102.5°	415.2	864.7	1189.7	1212.0	1310.8
105°	536.3	1104.4	1351.6	1525.5	1592.3
107.5°	663.4	1250.1	1520.8	1709.6	1782.5
110°	786.1	1363.7	1705.9	1868.8	1947.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	910.5	1493.9	1910.9	2019.8	2096.1
115°	1039.3	1569.0	2102.5	2216.1	2251.8
117.5°	1163.8	1660.1	2244.4	2402.5	2429.9
120°	1287.5	1745.7	2356.7	2595.1	2628.5
122.5°	1408.5	1845.5	2403.6	2777.8	2803.8
125°	1522.2	1882.6	2518.9	2833.8	2947.1
127.5°	1635.8	1988.8	2594.1	2953.5	3046.2
130°	1743.0	2083.9	2614.0	2969.3	3107.9
132.5°	1851.6	2181.4	2643.6	3046.2	3106.6
135°	1954.4	2275.4	2678.0	3097.8	3195.6
137.5°	2050.5	2359.4	2707.7	3083.0	3227.6
140°	2143.3	2429.9	2733.7	3066.8	3194.2
142.5°	2228.6	2493.9	2763.3	3055.7	3171.0
145°	2317.2	2565.7	2804.1	3044.9	3152.4
147.5°	2396.5	2590.4	2846.3	3038.8	3133.9
150°	2469.3	2655.8	2891.4	3026.3	3107.9
152.5°	2536.1	2700.3	2924.8	3038.5	3092.7
155°	2597.8	2734.7	2936.3	3052.3	3097.8
157.5°	2654.8	2765.7	2944.7	3064.8	3101.8
160°	2706.3	2790.3	2949.8	3059.7	3100.5
162.5°	2749.8	2812.6	2950.8	3040.1	3075.5
165°	2788.9	2831.1	2942.0	3015.2	3048.6
167.5°	2821.3	2849.6	2923.8	2972.0	3012.8
170°	2849.6	2856.0	2902.6	2953.5	2968.0
172.5°	2870.5	2875.6	2884.4	2909.0	2922.5
175°	2885.7	2885.7	2878.3	2875.6	2879.3
177.5°	2894.1	2891.8	2877.0	2862.1	2862.1
180°	2876.2	2876.2	2876.2	2876.2	2876.2

(END OF REPORT)