

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931566

Luminaire Tested: DFN2DS-TR4F0-100DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931566
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-100DS940-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

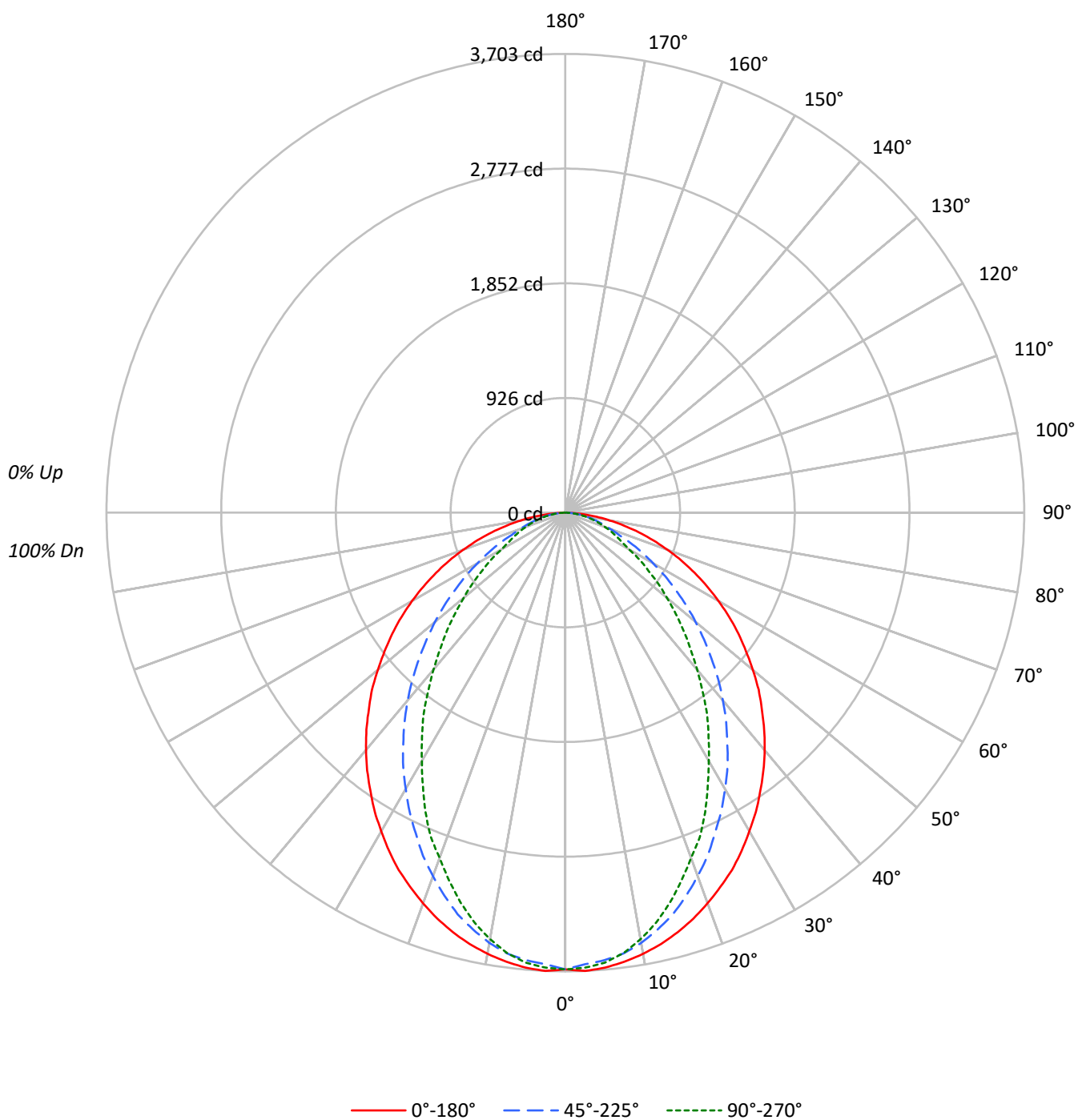
Lumens per Lamp: N/A
Luminaire Lumens: 7582.0 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 107.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931566

CATALOG NUMBER: DFN2DS-TR4F0-100DS940-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931566

CATALOG NUMBER: DFN2DS-TR4F0-100DS940-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2929	2929	2929
5°	2940	2892	2908
10°	2917	2845	2821
15°	2884	2760	2681
20°	2837	2640	2507
25°	2790	2503	2340
30°	2724	2363	2124
35°	2660	2210	1935
40°	2595	2052	1716
45°	2519	1874	1518
50°	2441	1695	1324
55°	2361	1502	1137
60°	2269	1299	944
65°	2164	1091	859
70°	2038	899	790
75°	1884	819	738
80°	1663	732	672
85°	1306	577	577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2519 cd/sqm

TEST NUMBER: P931566

CATALOG NUMBER: DFN2DS-TR4F0-100DS940-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.5	4.6
10°-20°	948.5	12.5
20°-30°	1331.7	17.6
30°-40°	1451.6	19.1
40°-50°	1334.2	17.6
50°-60°	1047.8	13.8
60°-70°	682.0	9.0
70°-80°	351.1	4.6
80°-90°	89.6	1.2
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°	2625.7	34.6
0°-40°	4077.3	53.8
0°-60°	6459.3	85.2
0°-90°	7582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3687	3687	3687	3687	3687	
5°	3687	3670	3626	3657	3647	350
15°	3506	3470	3356	3293	3260	988
25°	3183	3076	2856	2719	2669	1464
35°	2742	2572	2279	2069	1995	1717
45°	2242	2018	1668	1431	1351	1731
55°	1705	1445	1084	884	821	1523
65°	1151	881	580	467	457	1141
75°	614	380	267	244	240	649
85°	143	73	63	63	63	172
90°	0	0	0	0	0	

TEST NUMBER: P931566

CATALOG NUMBER: DFN2DS-TR4F0-100DS940-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3686.6	3686.6	3686.6	3686.6	3686.6
2.5°	3703.2	3686.6	3649.8	3683.4	3676.7
5°	3686.6	3670.0	3626.4	3656.6	3646.6
7.5°	3656.6	3636.7	3589.9	3603.1	3586.5
10°	3616.5	3593.2	3526.6	3516.4	3496.6
12.5°	3566.7	3536.5	3446.2	3426.4	3389.6
15°	3506.5	3469.6	3356.3	3293.0	3259.7
17.5°	3436.3	3382.9	3242.8	3169.5	3116.0
20°	3356.3	3289.4	3122.7	3039.6	2965.9
22.5°	3269.6	3192.8	2999.2	2886.0	2836.0
25°	3182.9	3076.1	2855.8	2719.2	2669.0
27.5°	3079.5	2965.9	2722.4	2565.6	2488.8
30°	2969.5	2842.4	2575.5	2405.6	2315.4
32.5°	2862.6	2708.9	2435.7	2235.4	2151.8
35°	2742.5	2572.3	2278.9	2068.6	1995.0
37.5°	2625.8	2442.0	2132.0	1901.6	1818.3
40°	2502.2	2302.3	1978.4	1741.5	1654.8
42.5°	2375.5	2162.0	1825.1	1578.0	1494.8
45°	2242.0	2018.3	1668.3	1431.1	1351.1
47.5°	2115.4	1878.6	1518.2	1281.0	1207.8
50°	1975.2	1738.3	1371.3	1140.9	1071.1
52.5°	1838.1	1587.9	1231.1	1010.9	947.6
55°	1704.7	1444.6	1084.2	884.2	820.8
57.5°	1568.1	1301.2	954.4	767.4	714.0
60°	1427.9	1161.0	817.3	647.4	594.0
62.5°	1291.3	1024.4	700.5	540.6	514.0
65°	1151.1	880.7	580.5	467.2	457.0
67.5°	1017.7	747.2	467.2	410.2	400.3
70°	877.5	617.4	386.9	353.6	340.2
72.5°	744.0	496.9	323.5	296.9	290.3
75°	613.8	380.2	266.9	243.5	240.3
77.5°	483.9	270.1	210.2	196.8	190.1
80°	363.5	193.7	160.0	146.9	146.9
82.5°	253.4	130.2	110.1	103.4	103.4
85°	143.3	73.2	63.3	63.3	63.3
87.5°	53.4	26.6	26.6	23.4	23.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931566

CATALOG NUMBER: DFN2DS-TR4F0-100DS940-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.97	16.49	15.33	16.80	17.12	10.93	12.45	11.29	12.76	13.08
	3H	16.73	18.10	17.11	18.43	18.79	12.19	13.56	12.57	13.89	14.25
	4H	17.40	18.68	17.80	19.03	19.41	12.70	13.98	13.10	14.32	14.70
	6H	17.89	19.07	18.30	19.44	19.83	13.08	14.26	13.49	14.63	15.02
	8H	18.05	19.18	18.48	19.57	19.97	13.20	14.33	13.63	14.72	15.12
	12H	18.16	19.24	18.59	19.62	20.05	13.28	14.36	13.71	14.74	15.17
4H	2H	15.07	16.35	15.47	16.70	17.08	11.62	12.90	12.02	13.25	13.63
	3H	17.01	18.07	17.42	18.47	18.87	13.07	14.13	13.48	14.53	14.93
	4H	17.76	18.71	18.19	19.13	19.57	13.67	14.62	14.10	15.04	15.48
	6H	18.35	19.18	18.80	19.62	20.08	14.15	14.99	14.61	15.43	15.89
	8H	18.56	19.34	19.02	19.78	20.25	14.32	15.09	14.78	15.54	16.01
	12H	18.71	19.41	19.20	19.89	20.36	14.43	15.13	14.92	15.61	16.08
8H	4H	17.78	18.56	18.24	19.00	19.47	14.02	14.80	14.48	15.24	15.71
	6H	18.42	19.06	18.91	19.55	20.03	14.61	15.25	15.10	15.74	16.22
	8H	18.67	19.24	19.18	19.75	20.24	14.83	15.40	15.34	15.91	16.40
	12H	18.87	19.38	19.38	19.87	20.44	15.01	15.52	15.52	16.01	16.57
12H	4H	17.76	18.46	18.25	18.94	19.41	14.06	14.76	14.55	15.24	15.71
	6H	18.40	18.98	18.91	19.48	19.97	14.67	15.25	15.18	15.76	16.25
	8H	18.68	19.19	19.19	19.68	20.25	14.94	15.45	15.45	15.95	16.51