

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: P931559

Luminaire Tested: DFN2DS-TR4F0-100DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-100DS927-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

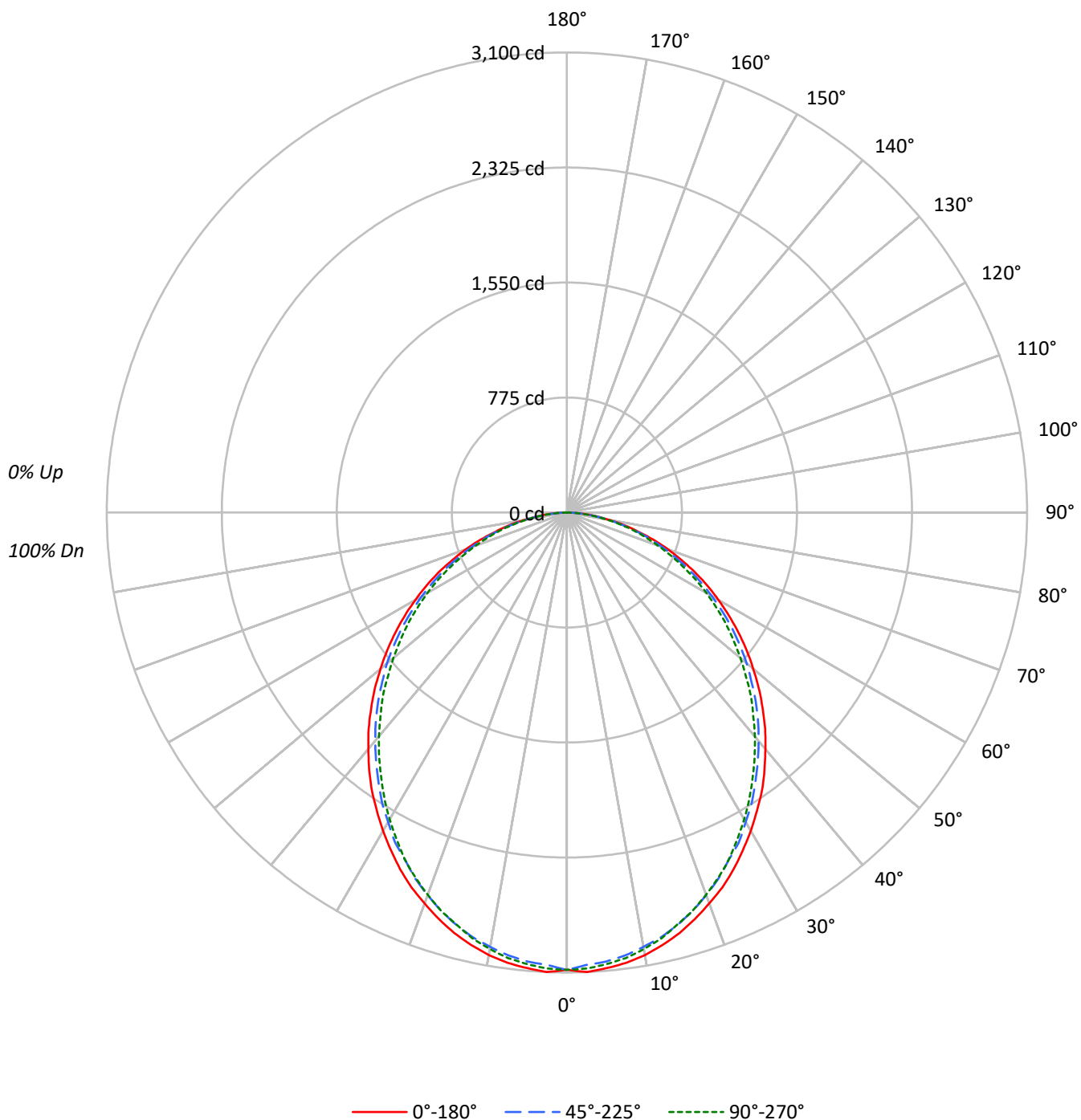
Lumens per Lamp: N/A
Luminaire Lumens: 7840.8 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

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: P931559

CATALOG NUMBER: DFN2DS-TR4F0-100DS927-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931559

CATALOG NUMBER: DFN2DS-TR4F0-100DS927-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2448	2448	2448
5°	2458	2422	2437
10°	2443	2398	2410
15°	2413	2366	2364
20°	2370	2320	2317
25°	2327	2263	2263
30°	2273	2210	2191
35°	2222	2147	2115
40°	2157	2083	2044
45°	2094	2021	1971
50°	2025	1956	1886
55°	1954	1880	1810
60°	1874	1789	1723
65°	1788	1699	1621
70°	1680	1590	1515
75°	1528	1464	1428
80°	1356	1314	1247
85°	1106	1055	946

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2094 cd/sqm

TEST NUMBER: P931559

CATALOG NUMBER: DFN2DS-TR4F0-100DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.1	3.7
10°-20°	816.1	10.4
20°-30°	1199.3	15.3
30°-40°	1392.9	17.8
40°-50°	1391.2	17.7
50°-60°	1213.1	15.5
60°-70°	896.8	11.4
70°-80°	507.4	6.5
80°-90°	133.9	1.7
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°	2305.5	29.4
0°-40°	3698.4	47.2
0°-60°	6302.7	80.4
0°-90°	7840.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7840.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3082	3082	3082	3082	3082	
5°	3082	3070	3037	3061	3055	293
15°	2934	2916	2877	2889	2875	826
25°	2655	2632	2581	2587	2581	1222
35°	2291	2261	2214	2196	2181	1430
45°	1864	1843	1799	1766	1754	1439
55°	1411	1393	1357	1322	1307	1261
65°	951	934	904	877	862	941
75°	498	492	477	459	465	531
85°	121	119	116	107	104	143
90°	0	0	0	0	0	

TEST NUMBER: P931559

CATALOG NUMBER: DFN2DS-TR4F0-100DS927-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3081.8	3081.8	3081.8	3081.8	3081.8
2.5°	3099.7	3084.8	3052.1	3081.8	3076.0
5°	3081.8	3070.1	3037.4	3061.0	3055.3
7.5°	3061.0	3043.3	3010.6	3034.5	3028.6
10°	3028.6	3007.9	2972.3	2995.9	2987.1
12.5°	2983.9	2966.4	2930.8	2945.6	2939.6
15°	2933.6	2916.1	2877.3	2889.3	2874.6
17.5°	2871.4	2853.8	2815.1	2829.9	2815.1
20°	2803.1	2785.5	2744.0	2752.8	2741.2
22.5°	2735.3	2708.6	2669.8	2669.8	2663.9
25°	2655.1	2631.5	2581.2	2586.8	2581.2
27.5°	2566.1	2545.3	2507.0	2498.2	2483.4
30°	2477.5	2453.5	2409.2	2400.4	2388.4
32.5°	2382.5	2364.9	2317.4	2299.5	2287.5
35°	2290.7	2261.2	2213.6	2195.7	2180.9
37.5°	2186.9	2160.2	2112.7	2092.0	2077.2
40°	2080.3	2056.4	2009.0	1982.6	1970.7
42.5°	1976.6	1952.7	1905.6	1875.7	1858.1
45°	1864.1	1843.3	1798.6	1766.2	1754.4
47.5°	1754.4	1733.6	1686.1	1653.4	1635.8
50°	1638.6	1623.8	1582.3	1540.8	1526.1
52.5°	1526.1	1505.4	1466.9	1434.3	1413.6
55°	1410.7	1392.8	1357.3	1321.7	1307.0
57.5°	1295.0	1280.2	1241.5	1206.1	1194.1
60°	1179.3	1167.6	1126.1	1093.4	1084.6
62.5°	1066.7	1046.0	1016.5	986.9	975.0
65°	951.4	933.5	903.9	877.1	862.4
67.5°	832.9	817.7	791.4	770.6	758.7
70°	723.1	711.1	684.4	663.7	652.1
72.5°	610.6	598.6	583.9	563.1	554.2
75°	497.7	492.1	476.9	459.4	465.3
77.5°	397.1	385.1	379.1	370.3	361.5
80°	296.4	293.4	287.3	278.5	272.6
82.5°	201.6	201.6	198.7	186.8	186.8
85°	121.3	118.6	115.7	106.6	103.8
87.5°	53.5	47.4	41.5	32.7	29.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931559

CATALOG NUMBER: DFN2DS-TR4F0-100DS927-FLL

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	14.39	16.00	14.76	16.32	16.63	13.95	15.56	14.31	15.87	16.19
	3H	16.14	17.60	16.52	17.92	18.28	15.65	17.11	16.03	17.43	17.79
	4H	16.79	18.16	17.19	18.51	18.88	16.30	17.66	16.69	18.01	18.39
	6H	17.26	18.53	17.67	18.89	19.28	16.76	18.03	17.17	18.39	18.78
	8H	17.40	18.61	17.83	19.00	19.40	16.90	18.11	17.32	18.50	18.90
	12H	17.49	18.65	17.92	19.03	19.46	16.98	18.14	17.41	18.52	18.95
4H	2H	14.95	16.32	15.35	16.67	17.05	14.60	15.97	15.00	16.32	16.69
	3H	16.93	18.08	17.34	18.47	18.87	16.52	17.67	16.93	18.07	18.47
	4H	17.71	18.74	18.14	19.15	19.59	17.28	18.32	17.71	18.73	19.17
	6H	18.30	19.21	18.76	19.65	20.10	17.87	18.77	18.32	19.22	19.67
	8H	18.49	19.34	18.95	19.78	20.25	18.05	18.90	18.51	19.34	19.81
	12H	18.62	19.38	19.10	19.86	20.33	18.17	18.93	18.65	19.41	19.88
8H	4H	17.98	18.83	18.44	19.27	19.73	17.60	18.45	18.07	18.89	19.36
	6H	18.69	19.40	19.19	19.88	20.36	18.31	19.01	18.81	19.50	19.98
	8H	18.95	19.58	19.46	20.09	20.58	18.56	19.19	19.07	19.70	20.18
	12H	19.15	19.71	19.66	20.20	20.76	18.74	19.30	19.25	19.79	20.35
12H	4H	18.00	18.76	18.48	19.24	19.71	17.64	18.40	18.12	18.88	19.35
	6H	18.74	19.37	19.25	19.88	20.36	18.37	19.00	18.88	19.51	19.99
	8H	19.05	19.61	19.56	20.10	20.66	18.67	19.23	19.18	19.72	20.28