

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: P931583

Luminaire Tested: DFN2DS-TR4F0-110DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931583
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-TR4F0-110DS940-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

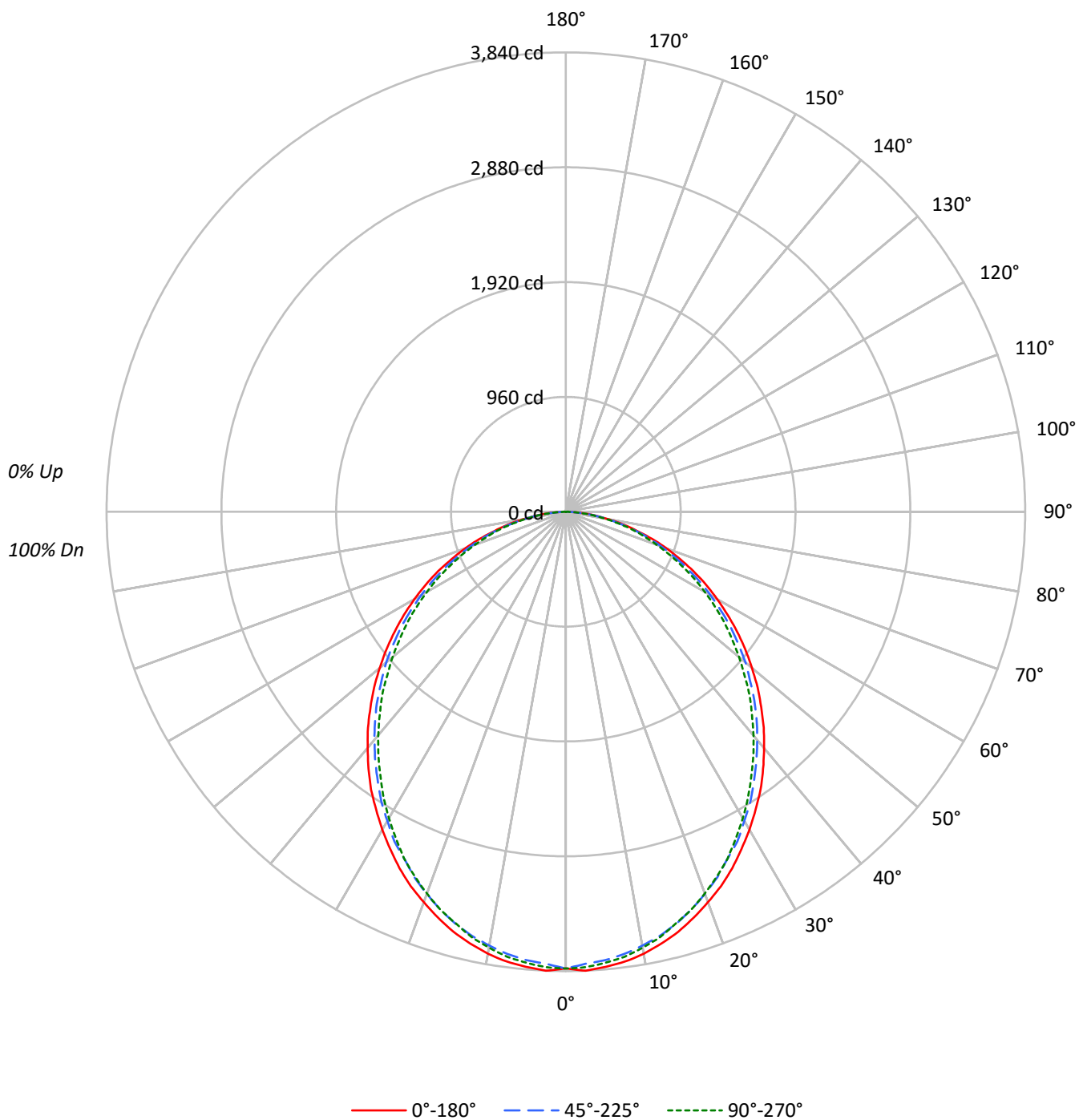
Lumens per Lamp: N/A
Luminaire Lumens: 9713.9 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 118.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931583

CATALOG NUMBER: DFN2DS-TR4F0-110DS940-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931583

CATALOG NUMBER: DFN2DS-TR4F0-110DS940-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°	3033	3033	3033
5°	3045	3001	3019
10°	3027	2971	2985
15°	2989	2932	2929
20°	2936	2874	2871
25°	2883	2803	2803
30°	2816	2738	2714
35°	2752	2660	2620
40°	2673	2581	2532
45°	2595	2503	2442
50°	2509	2423	2337
55°	2421	2329	2243
60°	2321	2217	2135
65°	2216	2105	2008
70°	2081	1969	1876
75°	1893	1814	1770
80°	1680	1629	1545
85°	1371	1306	1171

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2595 cd/sqm

TEST NUMBER: P931583

CATALOG NUMBER: DFN2DS-TR4F0-110DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.3	3.7
10°-20°	1011.1	10.4
20°-30°	1485.8	15.3
30°-40°	1725.7	17.8
40°-50°	1723.6	17.7
50°-60°	1502.9	15.5
60°-70°	1111.0	11.4
70°-80°	628.6	6.5
80°-90°	165.9	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°	2856.2	29.4
0°-40°	4582.0	47.2
0°-60°	7808.4	80.4
0°-90°	9713.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9713.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3818	3818	3818	3818	3818	
5°	3818	3804	3763	3792	3785	362
15°	3634	3613	3565	3580	3561	1024
25°	3289	3260	3198	3205	3198	1514
35°	2838	2801	2742	2720	2702	1772
45°	2309	2284	2228	2188	2173	1782
55°	1748	1726	1682	1637	1619	1563
65°	1179	1156	1120	1087	1068	1165
75°	617	610	591	569	576	658
85°	150	147	143	132	128	177
90°	0	0	0	0	0	

TEST NUMBER: P931583

CATALOG NUMBER: DFN2DS-TR4F0-110DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3817.9	3817.9	3817.9	3817.9	3817.9
2.5°	3840.1	3821.8	3781.3	3817.9	3810.9
5°	3817.9	3803.5	3763.0	3792.2	3785.2
7.5°	3792.2	3770.4	3729.9	3759.5	3752.1
10°	3752.1	3726.3	3682.4	3711.5	3700.6
12.5°	3696.8	3675.0	3631.0	3649.3	3641.9
15°	3634.5	3612.6	3564.7	3579.5	3561.2
17.5°	3557.3	3535.5	3487.6	3505.9	3487.6
20°	3472.8	3451.0	3399.6	3410.5	3396.1
22.5°	3388.7	3355.5	3307.6	3307.6	3300.2
25°	3289.3	3260.2	3197.8	3204.9	3197.8
27.5°	3179.1	3153.4	3105.9	3095.0	3076.7
30°	3069.3	3039.7	2984.7	2973.8	2959.0
32.5°	2951.6	2929.9	2871.0	2848.8	2834.0
35°	2837.9	2801.3	2742.5	2720.2	2702.0
37.5°	2709.4	2676.3	2617.5	2591.7	2573.4
40°	2577.3	2547.7	2488.9	2456.2	2441.4
42.5°	2448.8	2419.2	2360.8	2323.7	2302.0
45°	2309.4	2283.6	2228.3	2188.3	2173.4
47.5°	2173.4	2147.8	2088.9	2048.4	2026.5
50°	2030.1	2011.8	1960.3	1909.0	1890.7
52.5°	1890.7	1864.9	1817.4	1776.9	1751.2
55°	1747.7	1725.5	1681.5	1637.4	1619.2
57.5°	1604.4	1586.1	1538.2	1494.1	1479.3
60°	1461.0	1446.6	1395.2	1354.7	1343.8
62.5°	1321.6	1295.9	1259.2	1222.7	1207.9
65°	1178.6	1156.4	1119.8	1086.7	1068.4
67.5°	1031.8	1013.1	980.4	954.7	939.9
70°	895.8	881.0	847.9	822.2	807.8
72.5°	756.4	741.6	723.3	697.6	686.7
75°	616.6	609.6	590.9	569.1	576.5
77.5°	491.9	477.1	469.7	458.8	448.0
80°	367.3	363.4	356.0	345.1	337.7
82.5°	249.7	249.7	246.2	231.4	231.4
85°	150.4	146.8	143.3	132.0	128.5
87.5°	66.2	58.8	51.4	40.5	36.6
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931583

CATALOG NUMBER: DFN2DS-TR4F0-110DS940-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	15.14	16.75	15.50	17.06	17.38	14.69	16.30	15.06	16.62	16.93
	3H	16.89	18.34	17.26	18.67	19.03	16.40	17.85	16.77	18.18	18.54
	4H	17.53	18.90	17.93	19.25	19.63	17.04	18.41	17.44	18.76	19.13
	6H	18.00	19.27	18.41	19.64	20.03	17.50	18.77	17.91	19.14	19.53
	8H	18.15	19.36	18.57	19.75	20.15	17.64	18.85	18.07	19.24	19.64
	12H	18.24	19.40	18.67	19.78	20.21	17.72	18.88	18.15	19.27	19.69
4H	2H	15.70	17.07	16.10	17.42	17.79	15.35	16.71	15.74	17.06	17.44
	3H	17.67	18.82	18.08	19.22	19.62	17.27	18.41	17.68	18.81	19.21
	4H	18.45	19.49	18.88	19.90	20.34	18.03	19.06	18.46	19.48	19.91
	6H	19.05	19.95	19.50	20.39	20.85	18.61	19.52	19.07	19.96	20.42
	8H	19.24	20.08	19.70	20.52	20.99	18.80	19.64	19.26	20.09	20.55
	12H	19.37	20.13	19.85	20.60	21.07	18.92	19.68	19.40	20.15	20.62
8H	4H	18.72	19.57	19.18	20.01	20.48	18.35	19.20	18.81	19.64	20.10
	6H	19.44	20.14	19.93	20.63	21.10	19.06	19.76	19.55	20.25	20.72
	8H	19.70	20.33	20.21	20.83	21.32	19.30	19.94	19.81	20.44	20.93
	12H	19.90	20.45	20.40	20.94	21.51	19.48	20.04	19.99	20.53	21.09
12H	4H	18.75	19.51	19.23	19.98	20.45	18.38	19.14	18.86	19.62	20.09
	6H	19.48	20.11	19.99	20.62	21.11	19.11	19.75	19.62	20.25	20.74
	8H	19.80	20.35	20.30	20.84	21.41	19.42	19.98	19.93	20.47	21.03