

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: P930787

Luminaire Tested: DFN2DS-PN4F0-120DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930787
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-PN4F0-120DS930-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

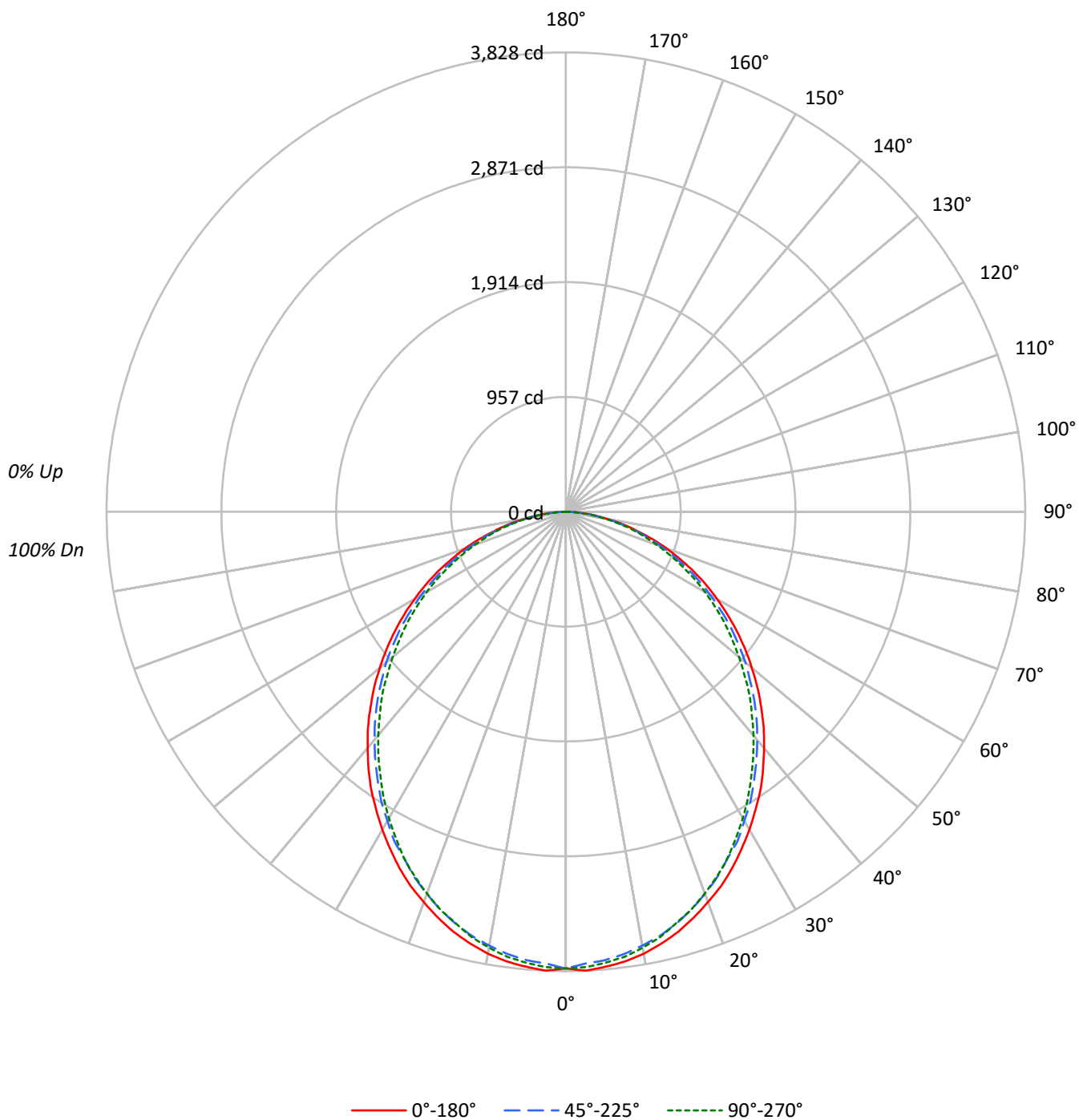
Lumens per Lamp: N/A
Luminaire Lumens: 9682.2 lumens
Efficiency: N/A
Efficacy: 73.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 131
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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
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°	2778	2778	2778
5°	2788	2748	2765
10°	2772	2721	2734
15°	2738	2685	2682
20°	2689	2632	2629
25°	2641	2567	2567
30°	2579	2508	2486
35°	2521	2436	2400
40°	2448	2364	2319
45°	2376	2293	2236
50°	2298	2219	2140
55°	2217	2133	2054
60°	2126	2030	1955
65°	2029	1928	1839
70°	1906	1804	1719
75°	1733	1661	1621
80°	1539	1492	1415
85°	1255	1197	1073

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2376 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.2	3.7
10°-20°	1007.7	10.4
20°-30°	1481.0	15.3
30°-40°	1720.1	17.8
40°-50°	1718.0	17.7
50°-60°	1498.0	15.5
60°-70°	1107.4	11.4
70°-80°	626.5	6.5
80°-90°	165.4	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°	2846.9	29.4
0°-40°	4567.0	47.2
0°-60°	7783.0	80.4
0°-90°	9682.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9682.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3806	3806	3806	3806	3806	
5°	3806	3791	3751	3780	3773	361
15°	3623	3601	3553	3568	3550	1020
25°	3279	3250	3187	3194	3187	1509
35°	2829	2792	2734	2711	2693	1766
45°	2302	2276	2221	2181	2166	1776
55°	1742	1720	1676	1632	1614	1557
65°	1175	1153	1116	1083	1065	1162
75°	615	608	589	567	575	656
85°	150	146	143	132	128	176
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3805.5	3805.5	3805.5	3805.5	3805.5
2.5°	3827.6	3809.3	3769.0	3805.5	3798.5
5°	3805.5	3791.1	3750.7	3779.8	3772.8
7.5°	3779.8	3758.0	3717.7	3747.2	3739.9
10°	3739.9	3714.2	3670.4	3699.4	3688.6
12.5°	3684.7	3662.9	3619.1	3637.3	3629.9
15°	3622.6	3600.8	3553.1	3567.8	3549.6
17.5°	3545.7	3524.0	3476.2	3494.5	3476.2
20°	3461.5	3439.7	3388.5	3399.4	3385.0
22.5°	3377.6	3344.6	3296.8	3296.8	3289.5
25°	3278.6	3249.5	3187.4	3194.4	3187.4
27.5°	3168.7	3143.1	3095.8	3084.9	3066.7
30°	3059.3	3029.8	2975.0	2964.2	2949.4
32.5°	2942.0	2920.3	2861.6	2839.5	2824.8
35°	2828.6	2792.2	2733.5	2711.4	2693.2
37.5°	2700.5	2667.6	2608.9	2583.3	2565.0
40°	2569.0	2539.5	2480.8	2448.2	2433.4
42.5°	2440.8	2411.3	2353.1	2316.2	2294.5
45°	2301.8	2276.2	2221.0	2181.1	2166.4
47.5°	2166.4	2140.7	2082.1	2041.7	2020.0
50°	2023.5	2005.2	1954.0	1902.7	1884.4
52.5°	1884.4	1858.9	1811.5	1771.1	1745.5
55°	1742.0	1719.9	1676.0	1632.1	1613.9
57.5°	1599.1	1580.9	1533.1	1489.2	1474.5
60°	1456.2	1441.9	1390.6	1350.3	1339.4
62.5°	1317.3	1291.6	1255.2	1218.7	1203.9
65°	1174.8	1152.7	1116.1	1083.1	1065.0
67.5°	1028.4	1009.8	977.2	951.6	936.8
70°	892.9	878.2	845.2	819.6	805.2
72.5°	754.0	739.2	720.9	695.4	684.4
75°	614.6	607.6	588.9	567.2	574.6
77.5°	490.3	475.6	468.2	457.3	446.5
80°	366.1	362.2	354.9	344.0	336.6
82.5°	248.8	248.8	245.4	230.6	230.6
85°	149.9	146.4	142.9	131.6	128.1
87.5°	66.0	58.6	51.3	40.3	36.5
90°	0.0	0.0	0.0	0.0	0.0

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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	14.83	16.44	15.20	16.76	17.07	14.39	16.00	14.75	16.31	16.63
	3H	16.58	18.04	16.96	18.36	18.72	16.09	17.55	16.47	17.87	18.23
	4H	17.23	18.60	17.63	18.95	19.32	16.73	18.10	17.13	18.45	18.83
	6H	17.70	18.97	18.11	19.33	19.72	17.20	18.46	17.61	18.83	19.22
	8H	17.84	19.05	18.27	19.44	19.84	17.34	18.55	17.76	18.94	19.34
	12H	17.93	19.09	18.36	19.47	19.90	17.42	18.58	17.85	18.96	19.39
4H	2H	15.39	16.76	15.79	17.11	17.49	15.04	16.41	15.44	16.76	17.13
	3H	17.37	18.51	17.78	18.91	19.31	16.96	18.11	17.37	18.50	18.90
	4H	18.14	19.18	18.58	19.59	20.03	17.72	18.76	18.15	19.17	19.61
	6H	18.74	19.65	19.20	20.09	20.54	18.31	19.21	18.76	19.65	20.11
	8H	18.93	19.78	19.39	20.22	20.68	18.49	19.34	18.95	19.78	20.25
	12H	19.06	19.82	19.54	20.30	20.77	18.61	19.37	19.09	19.85	20.32
8H	4H	18.42	19.26	18.88	19.71	20.17	18.04	18.89	18.50	19.33	19.80
	6H	19.13	19.83	19.63	20.32	20.80	18.75	19.45	19.24	19.94	20.42
	8H	19.39	20.02	19.90	20.53	21.01	19.00	19.63	19.51	20.14	20.62
	12H	19.59	20.15	20.10	20.64	21.20	19.18	19.74	19.68	20.23	20.79
12H	4H	18.44	19.20	18.92	19.68	20.15	18.08	18.84	18.56	19.31	19.78
	6H	19.18	19.81	19.69	20.32	20.80	18.81	19.44	19.32	19.95	20.43
	8H	19.49	20.05	20.00	20.54	21.10	19.11	19.67	19.62	20.16	20.72