

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: P930779

Luminaire Tested: DFN2DS-PN4F0-120DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930779
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-PN4F0-120DS835-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

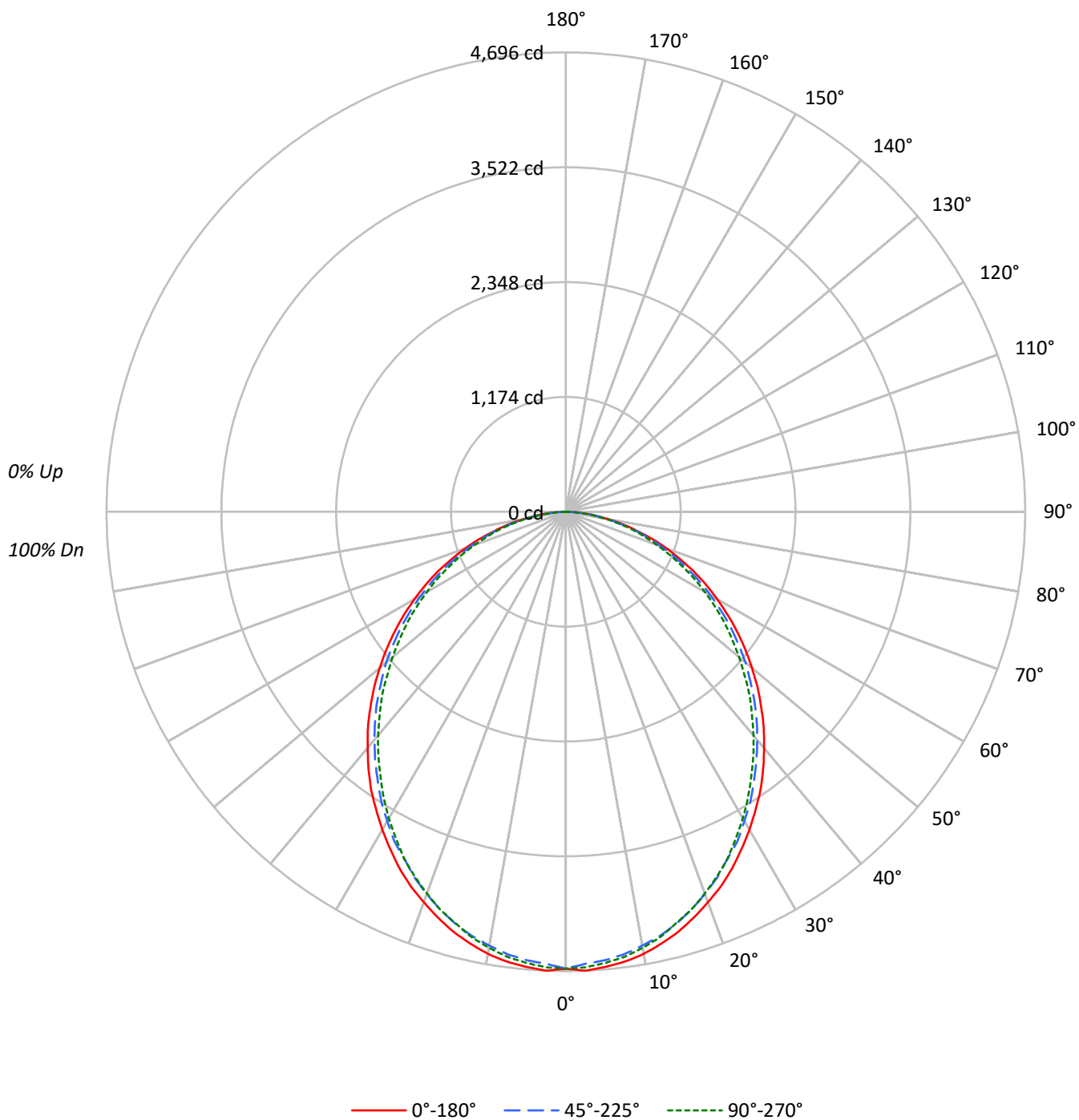
Lumens per Lamp: N/A
Luminaire Lumens: 11880.0 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P930779

CATALOG NUMBER: DFN2DS-PN4F0-120DS835-FLL

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°	3408	3408	3408
5°	3421	3372	3392
10°	3401	3338	3355
15°	3359	3295	3291
20°	3299	3230	3226
25°	3240	3150	3150
30°	3164	3077	3050
35°	3093	2989	2945
40°	3004	2901	2845
45°	2916	2813	2744
50°	2820	2723	2626
55°	2720	2617	2520
60°	2609	2491	2399
65°	2490	2365	2257
70°	2338	2213	2109
75°	2127	2038	1988
80°	1888	1830	1736
85°	1540	1468	1317

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2916 cd/sqm

TEST NUMBER: P930779

CATALOG NUMBER: DFN2DS-PN4F0-120DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.5	3.7
10°-20°	1236.5	10.4
20°-30°	1817.2	15.3
30°-40°	2110.5	17.8
40°-50°	2107.9	17.7
50°-60°	1838.0	15.5
60°-70°	1358.7	11.4
70°-80°	768.7	6.5
80°-90°	202.9	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°	3493.1	29.4
0°-40°	5603.7	47.2
0°-60°	9549.6	80.4
0°-90°	11880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11880.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4669	4669	4669	4669	4669	
5°	4669	4652	4602	4638	4629	443
15°	4445	4418	4360	4378	4355	1252
25°	4023	3987	3911	3920	3911	1851
35°	3471	3426	3354	3327	3304	2167
45°	2824	2793	2725	2676	2658	2180
55°	2137	2110	2056	2003	1980	1911
65°	1442	1414	1370	1329	1307	1425
75°	754	746	723	696	705	805
85°	184	180	175	162	157	216
90°	0	0	0	0	0	

TEST NUMBER: P930779

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4669.3	4669.3	4669.3	4669.3	4669.3
2.5°	4696.4	4674.0	4624.5	4669.3	4660.7
5°	4669.3	4651.6	4602.1	4637.8	4629.2
7.5°	4637.8	4611.1	4561.6	4597.8	4588.8
10°	4588.8	4557.3	4503.5	4539.2	4525.9
12.5°	4521.1	4494.4	4440.6	4463.0	4453.9
15°	4444.9	4418.2	4359.6	4377.7	4355.3
17.5°	4350.6	4323.9	4265.3	4287.7	4265.3
20°	4247.2	4220.5	4157.7	4171.0	4153.4
22.5°	4144.3	4103.8	4045.2	4045.2	4036.2
25°	4022.8	3987.1	3910.9	3919.5	3910.9
27.5°	3888.0	3856.6	3798.5	3785.1	3762.8
30°	3753.7	3717.5	3650.3	3637.0	3618.9
32.5°	3609.8	3583.2	3511.2	3484.1	3466.0
35°	3470.7	3426.0	3354.0	3326.9	3304.5
37.5°	3313.5	3273.1	3201.1	3169.7	3147.3
40°	3152.1	3115.9	3043.9	3003.9	2985.8
42.5°	2994.9	2958.7	2887.2	2842.0	2815.3
45°	2824.3	2792.9	2725.2	2676.2	2658.1
47.5°	2658.1	2626.6	2554.7	2505.2	2478.5
50°	2482.8	2460.4	2397.5	2334.6	2312.2
52.5°	2312.2	2280.8	2222.7	2173.1	2141.7
55°	2137.4	2110.3	2056.4	2002.6	1980.2
57.5°	1962.1	1939.7	1881.1	1827.3	1809.2
60°	1786.8	1769.2	1706.3	1656.8	1643.4
62.5°	1616.3	1584.8	1540.1	1495.3	1477.2
65°	1441.5	1414.3	1369.5	1329.0	1306.7
67.5°	1261.9	1239.0	1199.0	1167.6	1149.5
70°	1095.6	1077.5	1037.0	1005.6	988.0
72.5°	925.1	907.0	884.6	853.2	839.8
75°	754.1	745.5	722.6	696.0	705.0
77.5°	601.6	583.5	574.5	561.1	547.8
80°	449.2	444.4	435.4	422.1	413.0
82.5°	305.3	305.3	301.1	283.0	283.0
85°	183.9	179.6	175.3	161.5	157.2
87.5°	81.0	71.9	62.9	49.5	44.8
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	15.54	17.15	15.91	17.47	17.78	15.10	16.71	15.46	17.02	17.34
	3H	17.29	18.75	17.67	19.07	19.43	16.80	18.26	17.18	18.58	18.94
	4H	17.94	19.31	18.34	19.66	20.03	17.44	18.81	17.84	19.16	19.54
	6H	18.41	19.68	18.82	20.04	20.43	17.91	19.18	18.32	19.54	19.93
	8H	18.55	19.76	18.98	20.15	20.55	18.05	19.26	18.47	19.65	20.05
	12H	18.64	19.80	19.07	20.18	20.61	18.13	19.29	18.56	19.67	20.10
4H	2H	16.10	17.47	16.50	17.82	18.20	15.75	17.12	16.15	17.47	17.84
	3H	18.08	19.22	18.49	19.62	20.02	17.67	18.82	18.08	19.22	19.62
	4H	18.85	19.89	19.29	20.30	20.74	18.43	19.47	18.86	19.88	20.32
	6H	19.45	20.36	19.91	20.80	21.25	19.02	19.92	19.47	20.36	20.82
	8H	19.64	20.49	20.10	20.93	21.40	19.20	20.05	19.66	20.49	20.96
	12H	19.77	20.53	20.25	21.01	21.48	19.32	20.08	19.80	20.56	21.03
8H	4H	19.13	19.97	19.59	20.42	20.88	18.75	19.60	19.21	20.04	20.51
	6H	19.84	20.55	20.34	21.03	21.51	19.46	20.16	19.95	20.65	21.13
	8H	20.10	20.73	20.61	21.24	21.73	19.71	20.34	20.22	20.85	21.33
	12H	20.30	20.86	20.81	21.35	21.91	19.89	20.45	20.40	20.94	21.50
12H	4H	19.15	19.91	19.63	20.39	20.86	18.79	19.55	19.27	20.03	20.49
	6H	19.89	20.52	20.40	21.03	21.51	19.52	20.15	20.03	20.66	21.14
	8H	20.20	20.76	20.71	21.25	21.81	19.82	20.38	20.33	20.87	21.43