

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: P930793

Luminaire Tested: DFN2DS-PN4F0-120DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930793
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-PN4F0-120DS950-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

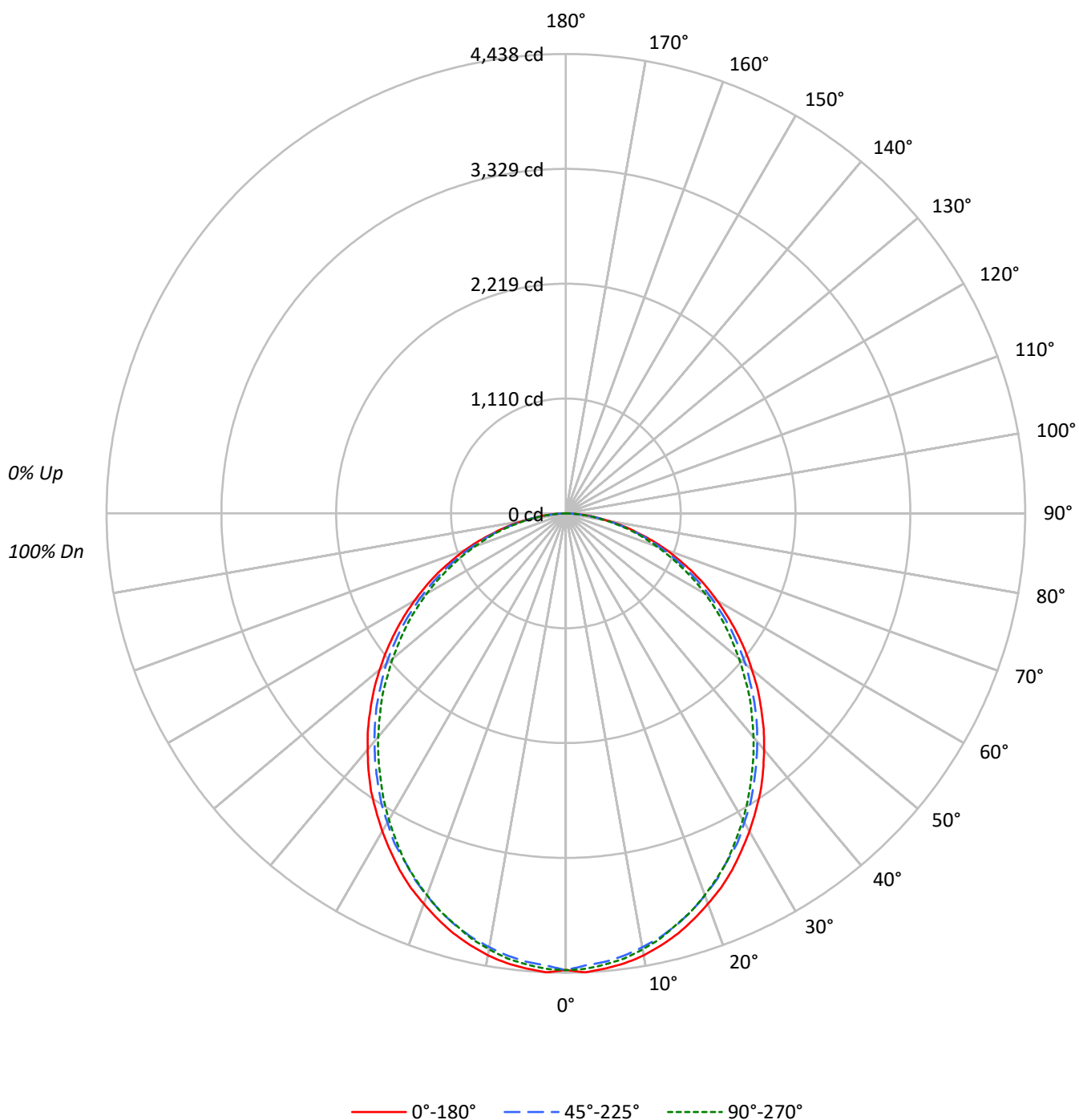
Lumens per Lamp: N/A
Luminaire Lumens: 11226.6 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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

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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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3221	3221	3221
5°	3233	3187	3205
10°	3214	3154	3170
15°	3174	3113	3110
20°	3118	3052	3049
25°	3062	2977	2977
30°	2990	2908	2883
35°	2923	2824	2783
40°	2838	2741	2689
45°	2755	2659	2593
50°	2664	2573	2481
55°	2570	2473	2381
60°	2465	2354	2267
65°	2353	2235	2133
70°	2210	2092	1993
75°	2010	1926	1879
80°	1784	1730	1641
85°	1456	1388	1245

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2755 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	415.3	3.7
10°-20°	1168.5	10.4
20°-30°	1717.2	15.3
30°-40°	1994.5	17.8
40°-50°	1992.0	17.7
50°-60°	1736.9	15.5
60°-70°	1284.0	11.4
70°-80°	726.4	6.5
80°-90°	191.7	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°	3301.0	29.4
0°-40°	5295.5	47.2
0°-60°	9024.4	80.4
0°-90°	11226.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11226.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4412	4412	4412	4412	4412	
5°	4412	4396	4349	4383	4375	419
15°	4200	4175	4120	4137	4116	1183
25°	3802	3768	3696	3704	3696	1749
35°	3280	3238	3170	3144	3123	2048
45°	2669	2639	2575	2529	2512	2060
55°	2020	1994	1943	1892	1871	1806
65°	1362	1336	1294	1256	1235	1347
75°	713	704	683	658	666	761
85°	174	170	166	153	149	204
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4412.5	4412.5	4412.5	4412.5	4412.5
2.5°	4438.1	4416.9	4370.2	4412.5	4404.4
5°	4412.5	4395.8	4349.0	4382.7	4374.6
7.5°	4382.7	4357.5	4310.7	4344.9	4336.4
10°	4336.4	4306.6	4255.8	4289.5	4277.0
12.5°	4272.4	4247.2	4196.4	4217.5	4208.9
15°	4200.4	4175.2	4119.8	4136.9	4115.8
17.5°	4111.3	4086.1	4030.7	4051.9	4030.7
20°	4013.6	3988.4	3929.0	3941.6	3925.0
22.5°	3916.4	3878.1	3822.7	3822.7	3814.2
25°	3801.5	3767.8	3695.8	3703.9	3695.8
27.5°	3674.2	3644.5	3589.6	3576.9	3555.8
30°	3547.2	3513.0	3449.5	3437.0	3419.9
32.5°	3411.3	3386.1	3318.1	3292.5	3275.4
35°	3279.8	3237.6	3169.5	3143.9	3122.8
37.5°	3131.3	3093.1	3025.0	2995.4	2974.2
40°	2978.7	2944.5	2876.5	2838.7	2821.6
42.5°	2830.2	2796.0	2728.4	2685.7	2660.5
45°	2669.0	2639.3	2575.3	2529.0	2511.9
47.5°	2511.9	2482.1	2414.2	2367.4	2342.2
50°	2346.2	2325.1	2265.6	2206.2	2185.0
52.5°	2185.0	2155.4	2100.5	2053.6	2023.9
55°	2019.8	1994.2	1943.3	1892.5	1871.3
57.5°	1854.2	1833.0	1777.6	1726.8	1709.7
60°	1688.5	1671.9	1612.5	1565.7	1553.0
62.5°	1527.4	1497.6	1455.4	1413.1	1396.0
65°	1362.2	1336.5	1294.2	1255.9	1234.8
67.5°	1192.5	1170.9	1133.1	1103.4	1086.3
70°	1035.3	1018.2	980.0	950.3	933.7
72.5°	874.2	857.1	835.9	806.3	793.6
75°	712.6	704.5	682.9	657.7	666.2
77.5°	568.5	551.4	542.9	530.2	517.7
80°	424.5	420.0	411.5	398.9	390.3
82.5°	288.5	288.5	284.5	267.4	267.4
85°	173.8	169.7	165.7	152.6	148.6
87.5°	76.5	67.9	59.4	46.8	42.3
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	15.35	16.96	15.71	17.27	17.59	14.90	16.51	15.27	16.83	17.14
	3H	17.10	18.55	17.47	18.88	19.24	16.61	18.06	16.98	18.39	18.75
	4H	17.74	19.11	18.14	19.46	19.84	17.25	18.62	17.65	18.96	19.34
	6H	18.21	19.48	18.62	19.84	20.24	17.71	18.98	18.12	19.34	19.73
	8H	18.35	19.57	18.78	19.95	20.35	17.85	19.06	18.28	19.45	19.85
	12H	18.45	19.61	18.87	19.99	20.42	17.93	19.09	18.36	19.47	19.90
4H	2H	15.91	17.28	16.31	17.62	18.00	15.55	16.92	15.95	17.27	17.65
	3H	17.88	19.03	18.29	19.43	19.83	17.48	18.62	17.88	19.02	19.42
	4H	18.66	19.69	19.09	20.11	20.54	18.23	19.27	18.67	19.68	20.12
	6H	19.25	20.16	19.71	20.60	21.06	18.82	19.73	19.28	20.17	20.62
	8H	19.44	20.29	19.90	20.73	21.20	19.01	19.85	19.47	20.30	20.76
	12H	19.58	20.34	20.06	20.81	21.28	19.12	19.88	19.60	20.36	20.83
8H	4H	18.93	19.78	19.39	20.22	20.69	18.56	19.40	19.02	19.85	20.31
	6H	19.65	20.35	20.14	20.84	21.31	19.26	19.97	19.76	20.46	20.93
	8H	19.91	20.54	20.41	21.04	21.53	19.51	20.14	20.02	20.65	21.14
	12H	20.11	20.66	20.61	21.15	21.71	19.69	20.25	20.20	20.74	21.30
12H	4H	18.96	19.72	19.44	20.19	20.66	18.59	19.35	19.07	19.83	20.30
	6H	19.69	20.32	20.20	20.83	21.32	19.32	19.95	19.83	20.46	20.95
	8H	20.01	20.56	20.51	21.05	21.61	19.63	20.19	20.13	20.68	21.24

END OF REPORT