

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: P930751

Luminaire Tested: DFN2DS-PN4F0-100DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930751
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-PN4F0-100DS930-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

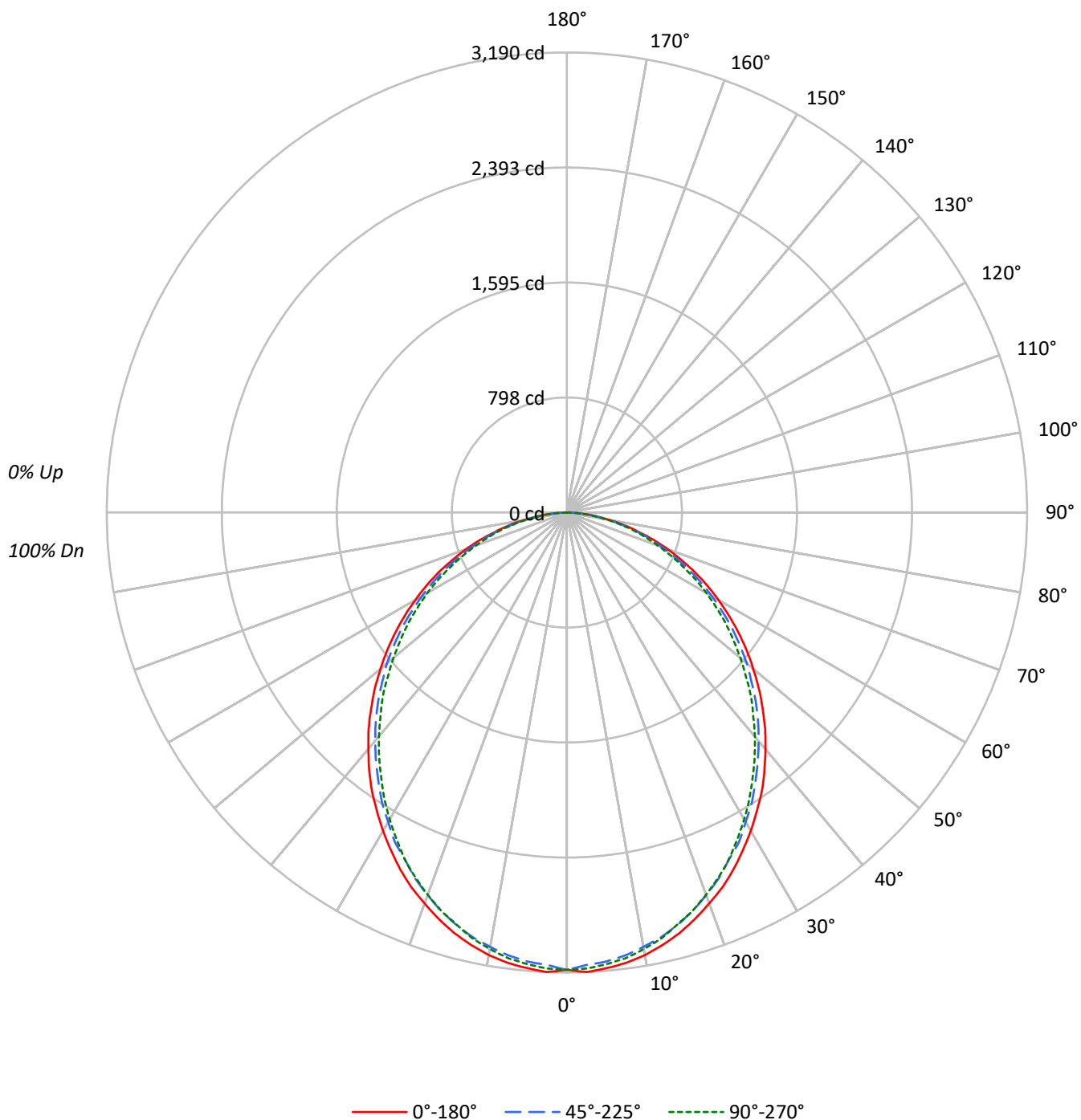
Lumens per Lamp: N/A
Luminaire Lumens: 8068.5 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 105.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
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°	2315	2315	2315
5°	2324	2290	2304
10°	2310	2267	2278
15°	2281	2238	2235
20°	2241	2193	2191
25°	2201	2139	2139
30°	2149	2090	2072
35°	2101	2030	2000
40°	2040	1970	1932
45°	1980	1911	1864
50°	1915	1849	1783
55°	1847	1778	1712
60°	1772	1692	1629
65°	1691	1607	1533
70°	1588	1503	1432
75°	1444	1384	1350
80°	1283	1243	1179
85°	1046	998	894

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1980 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.5	3.7
10°-20°	839.8	10.4
20°-30°	1234.2	15.3
30°-40°	1433.4	17.8
40°-50°	1431.6	17.7
50°-60°	1248.3	15.5
60°-70°	922.8	11.4
70°-80°	522.1	6.5
80°-90°	137.8	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°	2372.4	29.4
0°-40°	3805.8	47.2
0°-60°	6485.8	80.4
0°-90°	8068.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8068.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3171	3171	3171	3171	3171	
5°	3171	3159	3126	3150	3144	301
15°	3019	3001	2961	2973	2958	850
25°	2732	2708	2656	2662	2656	1257
35°	2357	2327	2278	2260	2244	1472
45°	1918	1897	1851	1818	1805	1480
55°	1452	1433	1397	1360	1345	1298
65°	979	961	930	903	888	968
75°	512	506	491	473	479	547
85°	125	122	119	110	107	147
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3171.2	3171.2	3171.2	3171.2	3171.2
2.5°	3189.7	3174.4	3140.8	3171.2	3165.4
5°	3171.2	3159.3	3125.6	3149.9	3144.0
7.5°	3149.9	3131.7	3098.1	3122.7	3116.6
10°	3116.6	3095.2	3058.6	3082.9	3073.9
12.5°	3070.6	3052.5	3015.9	3031.1	3025.0
15°	3018.8	3000.7	2960.9	2973.2	2958.0
17.5°	2954.8	2936.7	2896.8	2912.1	2896.8
20°	2884.5	2866.4	2823.7	2832.8	2820.8
22.5°	2814.7	2787.2	2747.4	2747.4	2741.3
25°	2732.2	2707.9	2656.2	2662.0	2656.2
27.5°	2640.6	2619.2	2579.8	2570.8	2555.5
30°	2549.4	2524.8	2479.1	2470.1	2457.8
32.5°	2451.7	2433.6	2384.7	2366.3	2354.0
35°	2357.2	2326.8	2277.9	2259.5	2244.3
37.5°	2250.5	2222.9	2174.1	2152.7	2137.5
40°	2140.8	2116.1	2067.3	2040.2	2027.9
42.5°	2034.0	2009.4	1960.9	1930.2	1912.1
45°	1918.2	1896.8	1850.9	1817.5	1805.3
47.5°	1805.3	1784.0	1735.1	1701.4	1683.3
50°	1686.2	1671.0	1628.3	1585.6	1570.4
52.5°	1570.4	1549.1	1509.5	1476.0	1454.6
55°	1451.7	1433.3	1396.7	1360.1	1344.9
57.5°	1332.6	1317.4	1277.6	1241.1	1228.8
60°	1213.5	1201.6	1158.8	1125.2	1116.1
62.5°	1097.7	1076.4	1046.0	1015.6	1003.3
65°	979.0	960.6	930.2	902.6	887.5
67.5°	857.1	841.5	814.3	793.0	780.7
70°	744.1	731.8	704.3	683.0	671.0
72.5°	628.3	616.0	600.8	579.5	570.3
75°	512.1	506.4	490.8	472.7	478.8
77.5°	408.6	396.3	390.1	381.1	372.0
80°	305.1	301.9	295.7	286.6	280.5
82.5°	207.4	207.4	204.5	192.2	192.2
85°	124.9	122.0	119.1	109.7	106.8
87.5°	55.0	48.8	42.7	33.7	30.4
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	14.20	15.81	14.56	16.12	16.44	13.75	15.37	14.12	15.68	15.99
	3H	15.95	17.40	16.33	17.73	18.09	15.46	16.91	15.83	17.24	17.60
	4H	16.60	17.96	16.99	18.31	18.69	16.10	17.47	16.50	17.82	18.19
	6H	17.06	18.33	17.48	18.70	19.09	16.56	17.83	16.97	18.20	18.59
	8H	17.21	18.42	17.63	18.81	19.21	16.70	17.92	17.13	18.30	18.70
	12H	17.30	18.46	17.73	18.84	19.27	16.79	17.95	17.22	18.33	18.76
4H	2H	14.76	16.13	15.16	16.48	16.85	14.41	15.78	14.80	16.12	16.50
	3H	16.73	17.88	17.14	18.28	18.68	16.33	17.47	16.74	17.87	18.27
	4H	17.51	18.55	17.94	18.96	19.40	17.09	18.12	17.52	18.54	18.97
	6H	18.11	19.01	18.56	19.45	19.91	17.68	18.58	18.13	19.02	19.48
	8H	18.30	19.14	18.76	19.59	20.05	17.86	18.71	18.32	19.15	19.61
	12H	18.43	19.19	18.91	19.66	20.13	17.98	18.74	18.46	19.21	19.68
8H	4H	17.78	18.63	18.24	19.07	19.54	17.41	18.26	17.87	18.70	19.16
	6H	18.50	19.20	18.99	19.69	20.17	18.12	18.82	18.61	19.31	19.78
	8H	18.76	19.39	19.27	19.90	20.38	18.37	19.00	18.88	19.50	19.99
	12H	18.96	19.52	19.46	20.01	20.57	18.54	19.10	19.05	19.59	20.15
12H	4H	17.81	18.57	18.29	19.05	19.52	17.45	18.21	17.93	18.68	19.15
	6H	18.54	19.18	19.05	19.68	20.17	18.18	18.81	18.68	19.31	19.80
	8H	18.86	19.42	19.36	19.91	20.47	18.48	19.04	18.99	19.53	20.09