

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: P930719

Luminaire Tested: DFN2DS-PN4F0-080DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930719
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-PN4F0-080DS940-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

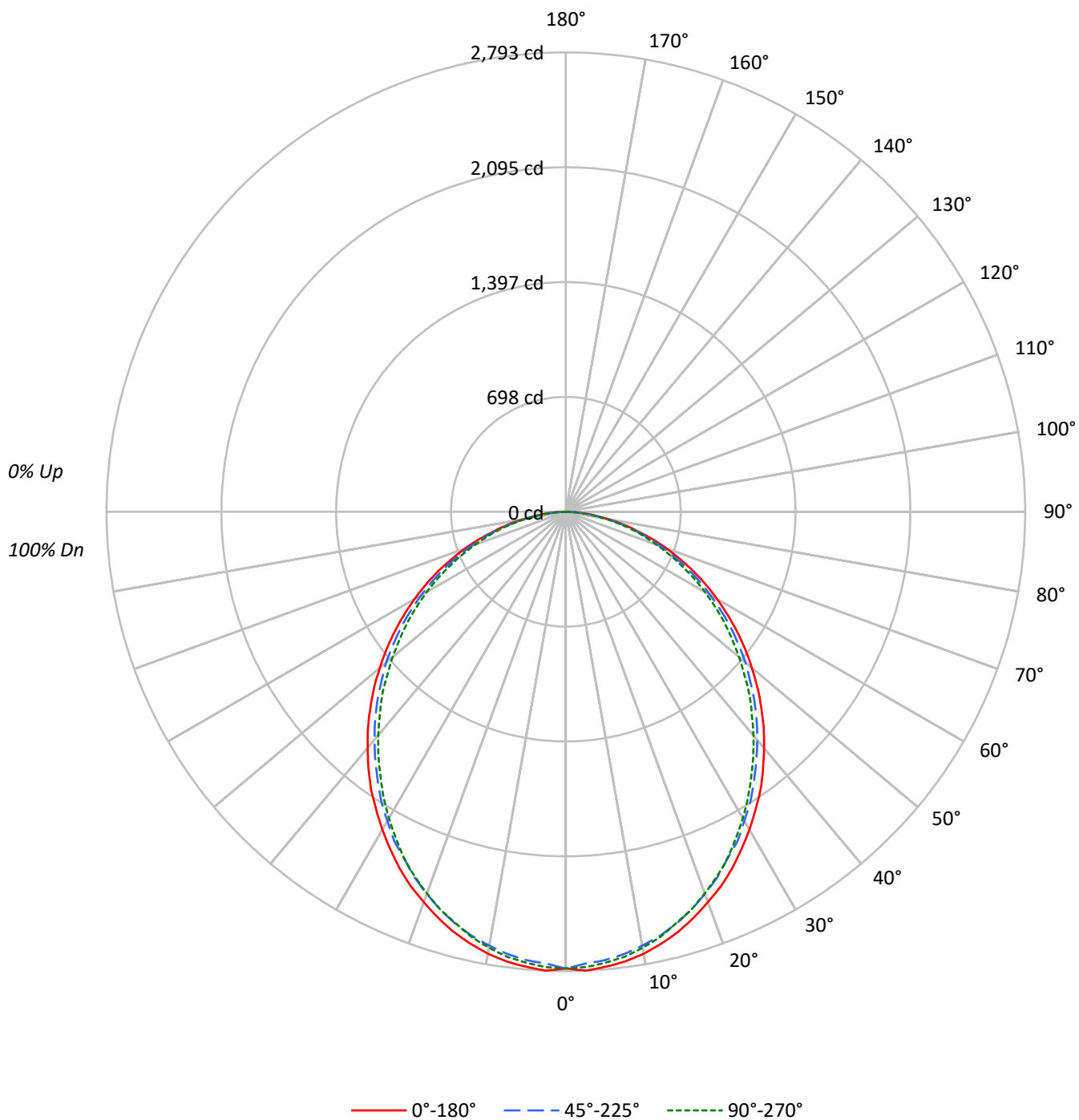
Lumens per Lamp: N/A
Luminaire Lumens: 7064.6 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 81.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930719

CATALOG NUMBER: DFN2DS-PN4F0-080DS940-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°	2027	2027	2027
5°	2035	2005	2017
10°	2023	1985	1995
15°	1998	1959	1957
20°	1962	1921	1919
25°	1927	1873	1873
30°	1881	1830	1814
35°	1839	1777	1751
40°	1786	1725	1692
45°	1734	1673	1632
50°	1677	1619	1561
55°	1618	1556	1499
60°	1551	1481	1427
65°	1481	1407	1342
70°	1390	1316	1254
75°	1265	1212	1182
80°	1123	1088	1032
85°	916	874	783

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1734 cd/sqm

TEST NUMBER: P930719

CATALOG NUMBER: DFN2DS-PN4F0-080DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	3.7
10°-20°	735.3	10.4
20°-30°	1080.6	15.3
30°-40°	1255.1	17.8
40°-50°	1253.5	17.7
50°-60°	1093.0	15.5
60°-70°	808.0	11.4
70°-80°	457.1	6.5
80°-90°	120.7	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°	2077.3	29.4
0°-40°	3332.3	47.2
0°-60°	5678.8	80.4
0°-90°	7064.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7064.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2777	2777	2777	2777	2777	
5°	2777	2766	2737	2758	2753	264
15°	2643	2627	2592	2603	2590	744
25°	2392	2371	2326	2331	2326	1101
35°	2064	2037	1994	1978	1965	1289
45°	1680	1661	1621	1591	1581	1296
55°	1271	1255	1223	1191	1178	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	129
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-PN4F0-080DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2776.6	2776.6	2776.6	2776.6	2776.6
2.5°	2792.8	2779.5	2750.0	2776.6	2771.5
5°	2776.6	2766.2	2736.7	2758.0	2752.9
7.5°	2758.0	2742.1	2712.7	2734.2	2728.8
10°	2728.8	2710.1	2678.1	2699.3	2691.4
12.5°	2688.6	2672.7	2640.7	2654.0	2648.6
15°	2643.3	2627.4	2592.5	2603.3	2590.0
17.5°	2587.2	2571.3	2536.4	2549.8	2536.4
20°	2525.7	2509.8	2472.4	2480.4	2469.9
22.5°	2464.5	2440.4	2405.5	2405.5	2400.2
25°	2392.3	2371.0	2325.7	2330.8	2325.7
27.5°	2312.1	2293.4	2258.8	2250.9	2237.6
30°	2232.2	2210.6	2170.8	2162.8	2152.0
32.5°	2146.7	2130.8	2088.0	2071.8	2061.1
35°	2063.9	2037.3	1994.5	1978.4	1965.1
37.5°	1970.4	1946.3	1903.6	1884.9	1871.6
40°	1874.4	1852.9	1810.1	1786.3	1775.5
42.5°	1781.0	1759.4	1716.9	1690.0	1674.2
45°	1679.5	1660.8	1620.6	1591.4	1580.7
47.5°	1580.7	1562.0	1519.2	1489.7	1473.9
50°	1476.4	1463.1	1425.7	1388.3	1375.0
52.5°	1375.0	1356.3	1321.8	1292.3	1273.6
55°	1271.0	1254.9	1222.9	1190.9	1177.5
57.5°	1166.8	1153.5	1118.7	1086.6	1075.8
60°	1062.6	1052.1	1014.6	985.2	977.3
62.5°	961.1	942.5	915.8	889.2	878.4
65°	857.2	841.1	814.4	790.3	777.0
67.5°	750.4	736.8	713.0	694.3	683.5
70°	651.5	640.7	616.7	598.0	587.5
72.5°	550.1	539.4	526.0	507.4	499.4
75°	448.4	443.3	429.8	413.9	419.2
77.5°	357.8	347.0	341.6	333.7	325.8
80°	267.2	264.3	258.9	251.0	245.6
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.4	106.8	104.3	96.1	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
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	13.74	15.35	14.10	15.66	15.98	13.29	14.90	13.66	15.22	15.53
	3H	15.49	16.94	15.86	17.27	17.63	15.00	16.45	15.37	16.78	17.14
	4H	16.13	17.50	16.53	17.85	18.23	15.64	17.01	16.04	17.36	17.73
	6H	16.60	17.87	17.01	18.24	18.63	16.10	17.37	16.51	17.73	18.13
	8H	16.75	17.96	17.17	18.35	18.74	16.24	17.45	16.67	17.84	18.24
	12H	16.84	18.00	17.27	18.38	18.81	16.32	17.48	16.75	17.87	18.29
4H	2H	14.30	15.67	14.70	16.01	16.39	13.94	15.31	14.34	15.66	16.04
	3H	16.27	17.42	16.68	17.82	18.22	15.87	17.01	16.28	17.41	17.81
	4H	17.05	18.08	17.48	18.50	18.93	16.63	17.66	17.06	18.07	18.51
	6H	17.65	18.55	18.10	18.99	19.45	17.21	18.12	17.67	18.56	19.01
	8H	17.84	18.68	18.30	19.12	19.59	17.40	18.24	17.86	18.69	19.15
	12H	17.97	18.73	18.45	19.20	19.67	17.51	18.27	17.99	18.75	19.22
8H	4H	17.32	18.17	17.78	18.61	19.08	16.95	17.79	17.41	18.24	18.70
	6H	18.04	18.74	18.53	19.23	19.70	17.66	18.36	18.15	18.85	19.32
	8H	18.30	18.93	18.81	19.43	19.92	17.90	18.53	18.41	19.04	19.53
	12H	18.50	19.05	19.00	19.54	20.11	18.08	18.64	18.59	19.13	19.69
12H	4H	17.35	18.11	17.83	18.58	19.05	16.98	17.74	17.46	18.22	18.69
	6H	18.08	18.71	18.59	19.22	19.71	17.71	18.35	18.22	18.85	19.34
	8H	18.40	18.95	18.90	19.44	20.01	18.02	18.58	18.52	19.07	19.63