

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: P929899

Luminaire Tested: DFN2DS-4P3F0-050DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929899
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-4P3F0-050DS840-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

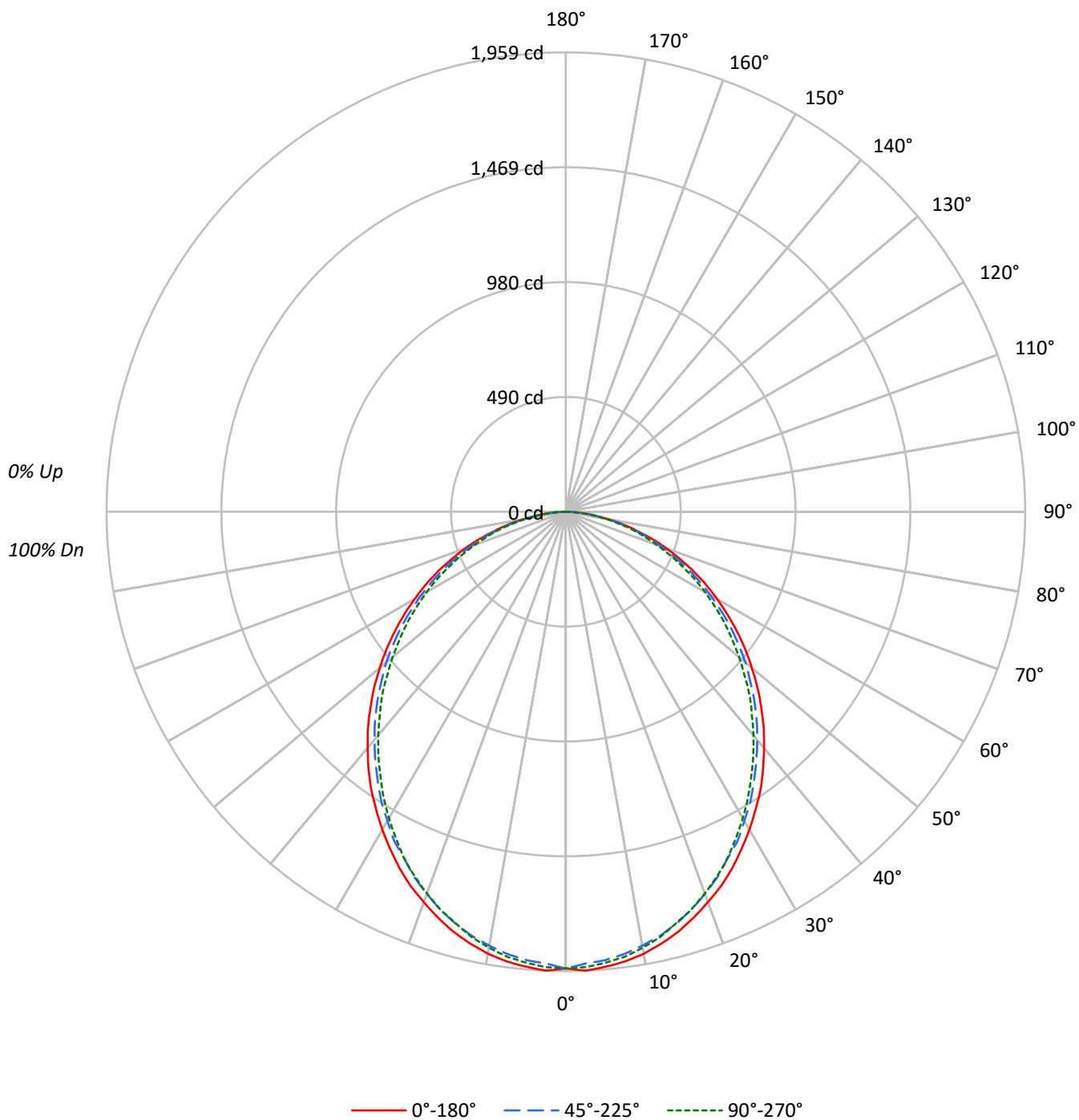
Lumens per Lamp: N/A
Luminaire Lumens: 4955.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
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: P929899

CATALOG NUMBER: DFN2DS-4P3F0-050DS840-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P929899

CATALOG NUMBER: DFN2DS-4P3F0-050DS840-FLL

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°	2219	2219	2219
5°	2228	2196	2209
10°	2215	2174	2184
15°	2187	2145	2143
20°	2148	2103	2101
25°	2110	2051	2051
30°	2060	2003	1986
35°	2014	1946	1917
40°	1956	1889	1853
45°	1899	1832	1787
50°	1836	1773	1710
55°	1771	1704	1641
60°	1698	1622	1562
65°	1621	1540	1469
70°	1523	1441	1373
75°	1385	1327	1295
80°	1230	1192	1131
85°	1003	956	858

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1899 cd/sqm

TEST NUMBER: P929899

CATALOG NUMBER: DFN2DS-4P3F0-050DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.3	3.7
10°-20°	515.7	10.4
20°-30°	757.9	15.3
30°-40°	880.3	17.8
40°-50°	879.2	17.7
50°-60°	766.6	15.5
60°-70°	566.7	11.4
70°-80°	320.6	6.5
80°-90°	84.6	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°	1456.9	29.4
0°-40°	2337.2	47.2
0°-60°	3983.0	80.4
0°-90°	4955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4955.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1947	1940	1919	1934	1931	185
15°	1854	1843	1818	1826	1816	522
25°	1678	1663	1631	1635	1631	772
35°	1448	1429	1399	1388	1378	904
45°	1178	1165	1137	1116	1109	909
55°	892	880	858	835	826	797
65°	601	590	571	554	545	594
75°	314	311	301	290	294	336
85°	77	75	73	67	66	90
90°	0	0	0	0	0	

TEST NUMBER: P929899

CATALOG NUMBER: DFN2DS-4P3F0-050DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1947.4	1947.4	1947.4	1947.4	1947.4
2.5°	1958.8	1949.4	1928.8	1947.4	1943.9
5°	1947.4	1940.1	1919.4	1934.3	1930.8
7.5°	1934.3	1923.2	1902.6	1917.7	1913.9
10°	1913.9	1900.8	1878.4	1893.2	1887.7
12.5°	1885.7	1874.6	1852.2	1861.5	1857.7
15°	1853.9	1842.7	1818.3	1825.9	1816.5
17.5°	1814.5	1803.4	1779.0	1788.3	1779.0
20°	1771.5	1760.4	1734.1	1739.6	1732.3
22.5°	1728.5	1711.6	1687.2	1687.2	1683.4
25°	1677.9	1663.0	1631.1	1634.7	1631.1
27.5°	1621.6	1608.5	1584.3	1578.7	1569.4
30°	1565.6	1550.5	1522.5	1516.9	1509.4
32.5°	1505.6	1494.5	1464.5	1453.2	1445.6
35°	1447.5	1428.9	1398.9	1387.6	1378.3
37.5°	1382.0	1365.2	1335.1	1322.0	1312.7
40°	1314.7	1299.6	1269.6	1252.9	1245.3
42.5°	1249.1	1234.0	1204.2	1185.3	1174.2
45°	1178.0	1164.9	1136.6	1116.2	1108.6
47.5°	1108.6	1095.5	1065.6	1044.8	1033.7
50°	1035.5	1026.2	1000.0	973.8	964.4
52.5°	964.4	951.3	927.0	906.4	893.3
55°	891.5	880.2	857.7	835.2	825.9
57.5°	818.3	809.0	784.6	762.2	754.6
60°	745.2	737.9	711.7	691.0	685.5
62.5°	674.2	661.1	642.3	623.6	616.1
65°	601.2	589.9	571.2	554.4	544.9
67.5°	526.3	516.8	500.1	487.0	479.4
70°	457.0	449.4	432.5	419.4	412.1
72.5°	385.9	378.3	369.0	355.9	350.2
75°	314.5	310.9	301.4	290.3	294.1
77.5°	251.0	243.3	239.6	234.0	228.5
80°	187.4	185.4	181.6	176.1	172.3
82.5°	127.3	127.3	125.5	118.0	118.0
85°	76.7	74.9	73.1	67.4	65.6
87.5°	33.7	30.0	26.2	20.6	18.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929899

CATALOG NUMBER: DFN2DS-4P3F0-050DS840-FLL

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	14.05	15.66	14.42	15.98	16.29	13.61	15.22	13.97	15.53	15.85
	3H	15.80	17.26	16.18	17.58	17.94	15.31	16.77	15.69	17.09	17.45
	4H	16.45	17.82	16.85	18.17	18.54	15.95	17.32	16.35	17.67	18.05
	6H	16.92	18.19	17.33	18.55	18.94	16.42	17.69	16.83	18.05	18.44
	8H	17.06	18.27	17.49	18.66	19.06	16.56	17.77	16.98	18.16	18.56
	12H	17.15	18.31	17.58	18.69	19.12	16.64	17.80	17.07	18.18	18.61
4H	2H	14.61	15.98	15.01	16.33	16.71	14.26	15.63	14.66	15.98	16.35
	3H	16.59	17.73	17.00	18.13	18.53	16.18	17.33	16.59	17.73	18.13
	4H	17.36	18.40	17.80	18.81	19.25	16.94	17.98	17.37	18.39	18.83
	6H	17.96	18.87	18.42	19.31	19.76	17.53	18.43	17.98	18.87	19.33
	8H	18.15	19.00	18.61	19.44	19.90	17.71	18.56	18.17	19.00	19.47
	12H	18.28	19.04	18.76	19.52	19.99	17.83	18.59	18.31	19.07	19.54
8H	4H	17.64	18.48	18.10	18.93	19.39	17.26	18.11	17.72	18.55	19.02
	6H	18.35	19.06	18.85	19.54	20.02	17.97	18.67	18.46	19.16	19.64
	8H	18.61	19.24	19.12	19.75	20.23	18.22	18.85	18.73	19.36	19.84
	12H	18.81	19.37	19.32	19.86	20.42	18.40	18.96	18.91	19.45	20.01
12H	4H	17.66	18.42	18.14	18.90	19.37	17.30	18.06	17.78	18.54	19.00
	6H	18.40	19.03	18.91	19.54	20.02	18.03	18.66	18.54	19.17	19.65
	8H	18.71	19.27	19.22	19.76	20.32	18.33	18.89	18.84	19.38	19.94