

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: P930653

Luminaire Tested: DFN2DS-PN4F0-050DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930653
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-PN4F0-050DS835-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

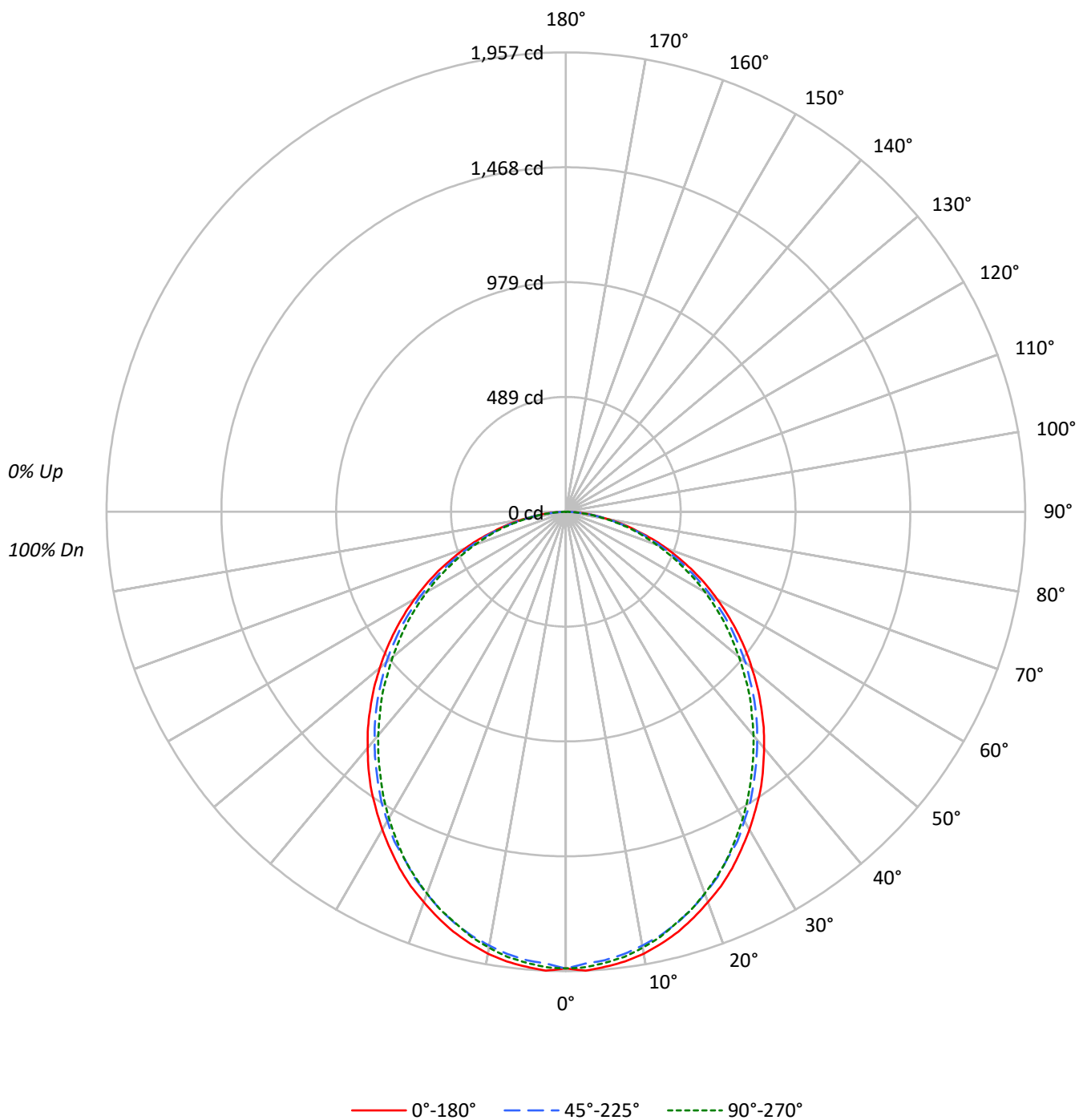
Lumens per Lamp: N/A
Luminaire Lumens: 4950.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 48.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930653

CATALOG NUMBER: DFN2DS-PN4F0-050DS835-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°	1420	1420	1420
5°	1426	1405	1413
10°	1417	1391	1398
15°	1400	1373	1371
20°	1375	1346	1344
25°	1350	1312	1312
30°	1318	1282	1271
35°	1289	1245	1227
40°	1252	1209	1185
45°	1215	1172	1143
50°	1175	1134	1094
55°	1133	1090	1050
60°	1087	1038	1000
65°	1037	986	940
70°	974	922	879
75°	886	849	829
80°	787	763	723
85°	642	611	549

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1215 cd/sqm

TEST NUMBER: P930653

CATALOG NUMBER: DFN2DS-PN4F0-050DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.1	3.7
10°-20°	515.2	10.4
20°-30°	757.2	15.3
30°-40°	879.4	17.8
40°-50°	878.3	17.7
50°-60°	765.8	15.5
60°-70°	566.1	11.4
70°-80°	320.3	6.5
80°-90°	84.5	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°	1455.5	29.4
0°-40°	2334.9	47.2
0°-60°	3979.0	80.4
0°-90°	4950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1946	1946	1946	1946	1946	
5°	1946	1938	1918	1932	1929	185
15°	1852	1841	1816	1824	1815	522
25°	1676	1661	1630	1633	1630	771
35°	1446	1428	1398	1386	1377	903
45°	1177	1164	1136	1115	1108	908
55°	891	879	857	834	825	796
65°	601	589	571	554	544	594
75°	314	311	301	290	294	335
85°	77	75	73	67	66	90
90°	0	0	0	0	0	

TEST NUMBER: P930653

CATALOG NUMBER: DFN2DS-PN4F0-050DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1945.5	1945.5	1945.5	1945.5	1945.5
2.5°	1956.8	1947.5	1926.9	1945.5	1942.0
5°	1945.5	1938.2	1917.5	1932.4	1928.9
7.5°	1932.4	1921.3	1900.7	1915.8	1912.0
10°	1912.0	1898.9	1876.5	1891.3	1885.8
12.5°	1883.8	1872.7	1850.3	1859.6	1855.8
15°	1852.0	1840.9	1816.5	1824.1	1814.7
17.5°	1812.7	1801.6	1777.2	1786.5	1777.2
20°	1769.7	1758.6	1732.4	1737.9	1730.6
22.5°	1726.8	1709.9	1685.5	1685.5	1681.7
25°	1676.2	1661.3	1629.5	1633.1	1629.5
27.5°	1620.0	1606.9	1582.7	1577.1	1567.8
30°	1564.0	1549.0	1521.0	1515.4	1507.9
32.5°	1504.1	1493.0	1463.0	1451.7	1444.2
35°	1446.1	1427.5	1397.5	1386.2	1376.9
37.5°	1380.6	1363.8	1333.8	1320.7	1311.4
40°	1313.4	1298.3	1268.3	1251.6	1244.1
42.5°	1247.9	1232.8	1203.0	1184.1	1173.0
45°	1176.8	1163.7	1135.5	1115.1	1107.5
47.5°	1107.5	1094.4	1064.5	1043.8	1032.7
50°	1034.5	1025.2	999.0	972.8	963.4
52.5°	963.4	950.3	926.1	905.5	892.4
55°	890.6	879.3	856.8	834.4	825.1
57.5°	817.5	808.2	783.8	761.4	753.8
60°	744.5	737.2	711.0	690.3	684.8
62.5°	673.5	660.4	641.7	623.0	615.5
65°	600.6	589.3	570.6	553.8	544.4
67.5°	525.8	516.3	499.6	486.5	478.9
70°	456.5	449.0	432.1	419.0	411.7
72.5°	385.5	377.9	368.6	355.5	349.9
75°	314.2	310.6	301.1	290.0	293.8
77.5°	250.7	243.1	239.4	233.8	228.3
80°	187.2	185.2	181.4	175.9	172.1
82.5°	127.2	127.2	125.4	117.9	117.9
85°	76.6	74.8	73.0	67.3	65.5
87.5°	33.7	30.0	26.2	20.6	18.7
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	12.50	14.11	12.87	14.43	14.74	12.06	13.67	12.42	13.98	14.30
	3H	14.25	15.71	14.63	16.03	16.39	13.76	15.21	14.14	15.54	15.90
	4H	14.90	16.27	15.30	16.61	16.99	14.40	15.77	14.80	16.12	16.50
	6H	15.37	16.64	15.78	17.00	17.39	14.87	16.13	15.28	16.50	16.89
	8H	15.51	16.72	15.93	17.11	17.51	15.01	16.22	15.43	16.61	17.01
	12H	15.60	16.76	16.03	17.14	17.57	15.09	16.25	15.52	16.63	17.06
4H	2H	13.06	14.43	13.46	14.78	15.15	12.71	14.08	13.11	14.43	14.80
	3H	15.04	16.18	15.45	16.58	16.98	14.63	15.78	15.04	16.17	16.57
	4H	15.81	16.85	16.24	17.26	17.70	15.39	16.43	15.82	16.84	17.28
	6H	16.41	17.31	16.86	17.76	18.21	15.98	16.88	16.43	17.32	17.78
	8H	16.60	17.45	17.06	17.89	18.35	16.16	17.01	16.62	17.45	17.92
	12H	16.73	17.49	17.21	17.97	18.44	16.28	17.04	16.76	17.51	17.98
8H	4H	16.09	16.93	16.55	17.38	17.84	15.71	16.56	16.17	17.00	17.47
	6H	16.80	17.50	17.29	17.99	18.47	16.42	17.12	16.91	17.61	18.09
	8H	17.06	17.69	17.57	18.20	18.68	16.67	17.30	17.18	17.81	18.29
	12H	17.26	17.82	17.77	18.31	18.87	16.85	17.40	17.35	17.90	18.46
12H	4H	16.11	16.87	16.59	17.35	17.82	15.75	16.51	16.23	16.98	17.45
	6H	16.85	17.48	17.36	17.98	18.47	16.48	17.11	16.99	17.62	18.10
	8H	17.16	17.72	17.67	18.21	18.77	16.78	17.34	17.29	17.83	18.39