

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: P929897

Luminaire Tested: DFN2DS-4P3F0-050DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929897
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-4P3F0-050DS835-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

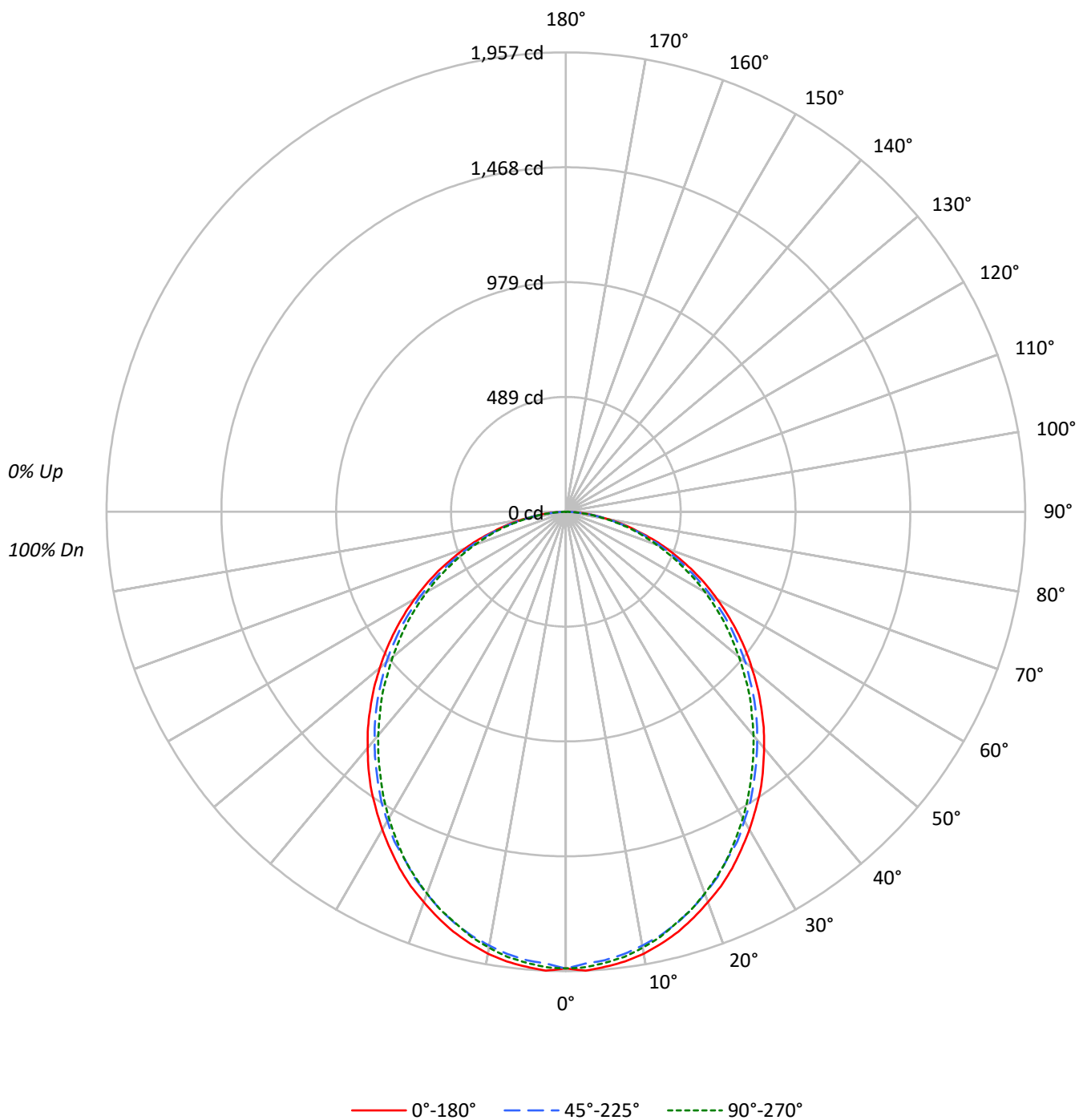
Lumens per Lamp: N/A
Luminaire Lumens: 4950.0 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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: P929897

CATALOG NUMBER: DFN2DS-4P3F0-050DS835-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°	2217	2217	2217
5°	2226	2194	2207
10°	2213	2171	2182
15°	2185	2143	2141
20°	2146	2101	2099
25°	2108	2049	2049
30°	2058	2001	1984
35°	2012	1944	1916
40°	1954	1887	1851
45°	1897	1830	1785
50°	1834	1771	1708
55°	1769	1702	1639
60°	1697	1621	1561
65°	1620	1539	1468
70°	1521	1440	1372
75°	1383	1326	1294
80°	1229	1190	1129
85°	1002	955	856

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1897 cd/sqm

TEST NUMBER: P929897

CATALOG NUMBER: DFN2DS-4P3F0-050DS835-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	

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CATALOG NUMBER: DFN2DS-4P3F0-050DS835-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	14.05	15.66	14.41	15.97	16.29	13.60	15.22	13.97	15.53	15.84
	3H	15.80	17.25	16.18	17.58	17.94	15.31	16.76	15.68	17.09	17.45
	4H	16.45	17.81	16.84	18.16	18.54	15.95	17.32	16.35	17.67	18.04
	6H	16.91	18.18	17.33	18.55	18.94	16.41	17.68	16.82	18.05	18.44
	8H	17.06	18.27	17.48	18.66	19.06	16.55	17.77	16.98	18.15	18.55
	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	16.70	14.26	15.63	14.65	15.97	16.35
	3H	16.58	17.73	16.99	18.13	18.53	16.18	17.32	16.59	17.72	18.12
	4H	17.36	18.40	17.79	18.81	19.25	16.94	17.97	17.37	18.39	18.82
	6H	17.96	18.86	18.41	19.30	19.76	17.53	18.43	17.98	18.87	19.33
	8H	18.15	18.99	18.61	19.44	19.90	17.71	18.56	18.17	19.00	19.46
	12H	18.28	19.04	18.76	19.51	19.98	17.83	18.59	18.31	19.06	19.53
8H	4H	17.63	18.48	18.09	18.92	19.39	17.26	18.11	17.72	18.55	19.01
	6H	18.35	19.05	18.84	19.54	20.02	17.97	18.67	18.46	19.16	19.63
	8H	18.61	19.24	19.12	19.75	20.23	18.22	18.85	18.73	19.35	19.84
	12H	18.81	19.37	19.31	19.86	20.42	18.39	18.95	18.90	19.44	20.00
12H	4H	17.66	18.42	18.14	18.90	19.37	17.30	18.06	17.78	18.53	19.00
	6H	18.39	19.03	18.90	19.53	20.02	18.03	18.66	18.54	19.16	19.65
	8H	18.71	19.27	19.21	19.76	20.32	18.33	18.89	18.84	19.38	19.94