

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: P931111

Luminaire Tested: DFN2DS-SQ4F0-080DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931111
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-SQ4F0-080DS930-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

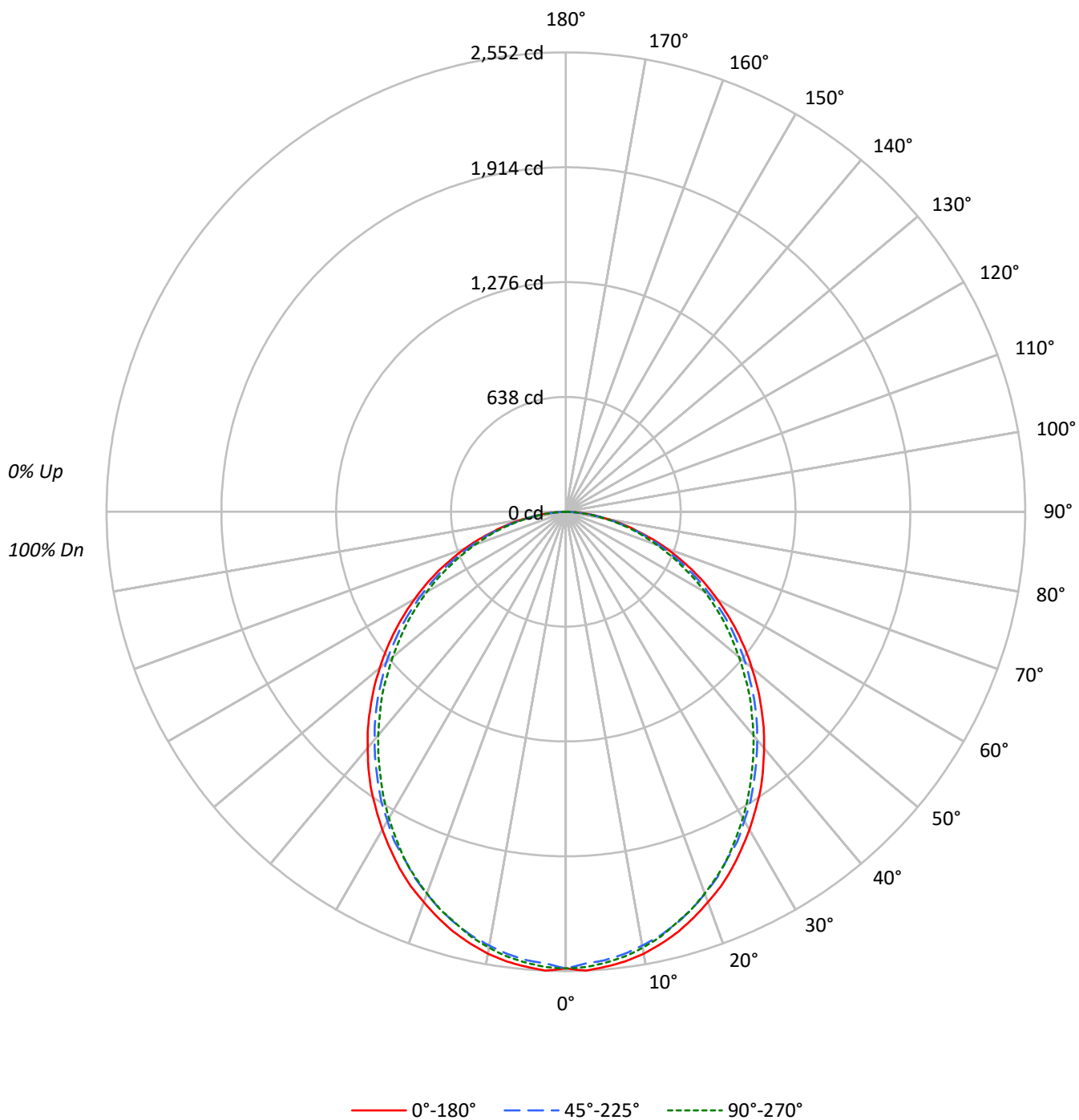
Lumens per Lamp: N/A
Luminaire Lumens: 6454.8 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 79.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931111

CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-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°	1780	1780	1780
5°	1787	1761	1772
10°	1776	1743	1752
15°	1754	1721	1719
20°	1723	1687	1685
25°	1692	1645	1645
30°	1652	1607	1593
35°	1615	1561	1538
40°	1569	1515	1486
45°	1523	1469	1433
50°	1473	1422	1371
55°	1421	1367	1316
60°	1362	1301	1253
65°	1300	1235	1179
70°	1221	1156	1101
75°	1111	1065	1038
80°	986	956	907
85°	804	767	688

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1523 cd/sqm

TEST NUMBER: P931111

CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.8	3.7
10°-20°	671.8	10.4
20°-30°	987.3	15.3
30°-40°	1146.7	17.8
40°-50°	1145.3	17.7
50°-60°	998.7	15.5
60°-70°	738.2	11.4
70°-80°	417.7	6.5
80°-90°	110.2	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°	1898.0	29.4
0°-40°	3044.7	47.2
0°-60°	5188.6	80.4
0°-90°	6454.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6454.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2537	2537	2537	2537	2537	
5°	2537	2527	2500	2520	2515	241
15°	2415	2401	2369	2379	2366	680
25°	2186	2166	2125	2130	2125	1006
35°	1886	1862	1822	1808	1795	1178
45°	1535	1517	1481	1454	1444	1184
55°	1161	1146	1117	1088	1076	1038
65°	783	768	744	722	710	774
75°	410	405	393	378	383	437
85°	100	98	95	88	85	117
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2536.9	2536.9	2536.9	2536.9	2536.9
2.5°	2551.7	2539.5	2512.6	2536.9	2532.3
5°	2536.9	2527.4	2500.5	2519.9	2515.3
7.5°	2519.9	2505.4	2478.5	2498.1	2493.2
10°	2493.2	2476.1	2446.9	2466.3	2459.1
12.5°	2456.5	2442.0	2412.7	2424.9	2420.0
15°	2415.1	2400.6	2368.7	2378.6	2366.4
17.5°	2363.8	2349.3	2317.5	2329.7	2317.5
20°	2307.7	2293.2	2259.0	2266.3	2256.7
22.5°	2251.8	2229.8	2197.9	2197.9	2193.0
25°	2185.7	2166.4	2124.9	2129.6	2124.9
27.5°	2112.5	2095.4	2063.8	2056.6	2044.4
30°	2039.5	2019.8	1983.4	1976.1	1966.3
32.5°	1961.4	1946.9	1907.8	1893.0	1883.2
35°	1885.7	1861.5	1822.3	1807.6	1795.4
37.5°	1800.3	1778.3	1739.3	1722.2	1710.0
40°	1712.6	1692.9	1653.9	1632.1	1622.3
42.5°	1627.2	1607.5	1568.7	1544.1	1529.7
45°	1534.6	1517.4	1480.7	1454.0	1444.3
47.5°	1444.3	1427.1	1388.0	1361.1	1346.6
50°	1349.0	1336.8	1302.6	1268.5	1256.3
52.5°	1256.3	1239.2	1207.7	1180.8	1163.7
55°	1161.3	1146.5	1117.4	1088.1	1075.9
57.5°	1066.1	1054.0	1022.1	992.8	983.0
60°	970.8	961.3	927.1	900.2	892.9
62.5°	878.2	861.1	836.8	812.5	802.6
65°	783.2	768.5	744.1	722.1	709.9
67.5°	685.6	673.2	651.4	634.4	624.5
70°	595.3	585.4	563.5	546.4	536.8
72.5°	502.6	492.8	480.6	463.6	456.3
75°	409.7	405.1	392.7	378.2	383.0
77.5°	326.9	317.0	312.1	304.9	297.6
80°	244.1	241.5	236.6	229.3	224.4
82.5°	165.9	165.9	163.6	153.7	153.7
85°	99.9	97.6	95.3	87.8	85.4
87.5°	44.0	39.1	34.1	26.9	24.4
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	13.29	14.90	13.65	15.21	15.53	12.84	14.45	13.21	14.77	15.08
	3H	15.04	16.49	15.41	16.82	17.18	14.55	16.00	14.92	16.33	16.69
	4H	15.68	17.05	16.08	17.40	17.78	15.19	16.56	15.59	16.90	17.28
	6H	16.15	17.42	16.56	17.79	18.18	15.65	16.92	16.06	17.28	17.67
	8H	16.29	17.51	16.72	17.89	18.29	15.79	17.00	16.22	17.39	17.79
	12H	16.39	17.55	16.81	17.93	18.36	15.87	17.03	16.30	17.41	17.84
4H	2H	13.85	15.22	14.25	15.56	15.94	13.49	14.86	13.89	15.21	15.59
	3H	15.82	16.97	16.23	17.37	17.77	15.41	16.56	15.82	16.96	17.36
	4H	16.60	17.63	17.03	18.05	18.48	16.17	17.21	16.61	17.62	18.06
	6H	17.19	18.10	17.65	18.54	19.00	16.76	17.67	17.22	18.11	18.56
	8H	17.38	18.23	17.84	18.67	19.14	16.95	17.79	17.41	18.24	18.70
	12H	17.52	18.28	18.00	18.75	19.22	17.06	17.82	17.54	18.30	18.77
8H	4H	16.87	17.72	17.33	18.16	18.63	16.50	17.34	16.96	17.79	18.25
	6H	17.59	18.29	18.08	18.78	19.25	17.20	17.91	17.70	18.40	18.87
	8H	17.85	18.48	18.36	18.98	19.47	17.45	18.08	17.96	18.59	19.08
	12H	18.05	18.60	18.55	19.09	19.65	17.63	18.19	18.14	18.68	19.24
12H	4H	16.90	17.66	17.38	18.13	18.60	16.53	17.29	17.01	17.77	18.24
	6H	17.63	18.26	18.14	18.77	19.26	17.26	17.89	17.77	18.40	18.89
	8H	17.95	18.50	18.45	18.99	19.55	17.57	18.12	18.07	18.62	19.18