

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: P931112

Luminaire Tested: DFN2DS-SQ4F0-080DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931112
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ4F0-080DS930-RLL
Description: 4 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

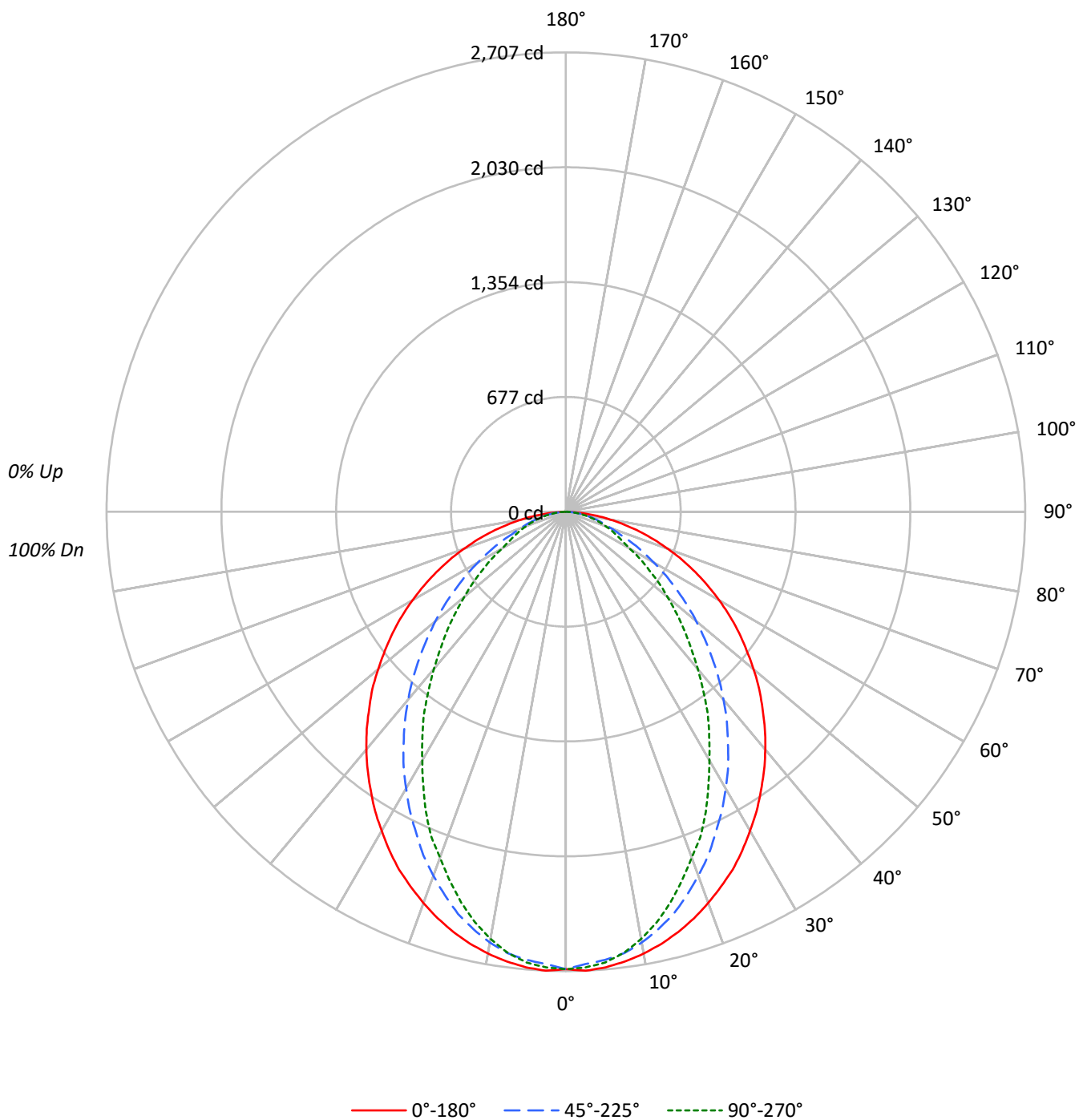
Lumens per Lamp: N/A
Luminaire Lumens: 5542.0 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

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: P931112

CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-RLL

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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1891	1891	1891
5°	1898	1867	1877
10°	1883	1837	1821
15°	1862	1782	1731
20°	1832	1704	1619
25°	1801	1616	1510
30°	1759	1525	1371
35°	1717	1427	1249
40°	1675	1325	1108
45°	1626	1210	980
50°	1576	1094	855
55°	1524	969	734
60°	1465	838	609
65°	1397	704	555
70°	1316	580	510
75°	1216	529	476
80°	1074	473	434
85°	844	373	373

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1626 cd/sqm

TEST NUMBER: P931112

CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.6	4.6
10°-20°	693.3	12.5
20°-30°	973.4	17.6
30°-40°	1061.0	19.1
40°-50°	975.2	17.6
50°-60°	765.9	13.8
60°-70°	498.5	9.0
70°-80°	256.6	4.6
80°-90°	65.5	1.2
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°	1919.2	34.6
0°-40°	2980.3	53.8
0°-60°	4721.4	85.2
0°-90°	5542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5542.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2695	2695	2695	2695	2695	
5°	2695	2683	2651	2673	2666	256
15°	2563	2536	2453	2407	2383	722
25°	2326	2248	2088	1988	1951	1070
35°	2005	1880	1666	1512	1458	1255
45°	1639	1475	1219	1046	988	1266
55°	1246	1056	792	646	600	1113
65°	841	644	424	342	334	834
75°	449	278	195	178	176	475
85°	105	54	46	46	46	126
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ4F0-080DS930-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2694.7	2694.7	2694.7	2694.7	2694.7
2.5°	2706.9	2694.7	2667.8	2692.4	2687.5
5°	2694.7	2682.6	2650.7	2672.7	2665.5
7.5°	2672.7	2658.2	2624.1	2633.7	2621.4
10°	2643.5	2626.4	2577.8	2570.3	2555.8
12.5°	2607.0	2585.0	2519.0	2504.5	2477.6
15°	2563.0	2536.1	2453.3	2407.0	2382.7
17.5°	2511.7	2472.7	2370.3	2316.7	2277.6
20°	2453.3	2404.4	2282.6	2221.8	2167.9
22.5°	2389.9	2333.8	2192.3	2109.5	2073.0
25°	2326.5	2248.4	2087.5	1987.6	1950.9
27.5°	2250.9	2167.9	1989.9	1875.3	1819.2
30°	2170.5	2077.6	1882.6	1758.4	1692.3
32.5°	2092.3	1980.1	1780.4	1633.9	1572.9
35°	2004.7	1880.2	1665.7	1512.1	1458.2
37.5°	1919.2	1785.0	1558.4	1389.9	1329.1
40°	1829.0	1682.8	1446.1	1272.9	1209.5
42.5°	1736.4	1580.4	1334.0	1153.5	1092.6
45°	1638.8	1475.3	1219.4	1046.1	987.6
47.5°	1546.2	1373.1	1109.7	936.4	882.8
50°	1443.7	1270.7	1002.4	833.9	782.9
52.5°	1343.6	1160.6	899.8	739.0	692.7
55°	1246.1	1055.9	792.5	646.3	600.0
57.5°	1146.2	951.1	697.6	561.0	521.8
60°	1043.7	848.7	597.4	473.2	434.2
62.5°	943.9	748.7	512.1	395.1	375.7
65°	841.4	643.7	424.3	341.6	334.0
67.5°	743.9	546.2	341.6	299.8	292.7
70°	641.4	451.3	282.8	258.4	248.7
72.5°	543.8	363.2	236.5	217.1	212.1
75°	448.7	277.9	195.1	178.0	175.7
77.5°	353.7	197.4	153.7	143.8	139.0
80°	265.7	141.6	117.0	107.3	107.3
82.5°	185.2	95.2	80.4	75.6	75.6
85°	104.8	53.5	46.3	46.3	46.3
87.5°	39.0	19.4	19.4	17.1	17.1
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	13.45	14.97	13.81	15.28	15.60	9.41	10.93	9.77	11.24	11.56
	3H	15.21	16.58	15.59	16.91	17.27	10.67	12.04	11.05	12.37	12.73
	4H	15.88	17.16	16.28	17.51	17.89	11.18	12.46	11.58	12.80	13.18
	6H	16.37	17.55	16.78	17.92	18.31	11.56	12.74	11.97	13.11	13.50
	8H	16.53	17.66	16.96	18.05	18.45	11.68	12.81	12.11	13.20	13.60
	12H	16.64	17.72	17.07	18.10	18.53	11.76	12.84	12.19	13.22	13.65
4H	2H	13.55	14.83	13.95	15.18	15.56	10.10	11.38	10.50	11.73	12.11
	3H	15.49	16.55	15.90	16.95	17.35	11.55	12.61	11.96	13.01	13.41
	4H	16.23	17.19	16.67	17.61	18.05	12.15	13.10	12.58	13.52	13.96
	6H	16.83	17.66	17.28	18.10	18.56	12.63	13.47	13.09	13.91	14.37
	8H	17.04	17.82	17.50	18.26	18.73	12.80	13.57	13.26	14.02	14.49
	12H	17.19	17.89	17.68	18.37	18.84	12.91	13.61	13.40	14.09	14.56
8H	4H	16.26	17.04	16.72	17.48	17.95	12.50	13.28	12.96	13.72	14.19
	6H	16.90	17.54	17.39	18.03	18.51	13.09	13.73	13.58	14.22	14.70
	8H	17.15	17.72	17.66	18.23	18.72	13.31	13.88	13.82	14.39	14.88
	12H	17.35	17.86	17.86	18.35	18.92	13.49	14.00	14.00	14.49	15.05
12H	4H	16.24	16.94	16.73	17.42	17.89	12.54	13.24	13.03	13.72	14.19
	6H	16.88	17.45	17.39	17.96	18.45	13.15	13.73	13.66	14.24	14.73
	8H	17.16	17.67	17.67	18.16	18.73	13.42	13.93	13.93	14.43	14.99