

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: P931149

Luminaire Tested: DFN2DS-SQ4F0-100DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931149
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-SQ4F0-100DS935-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

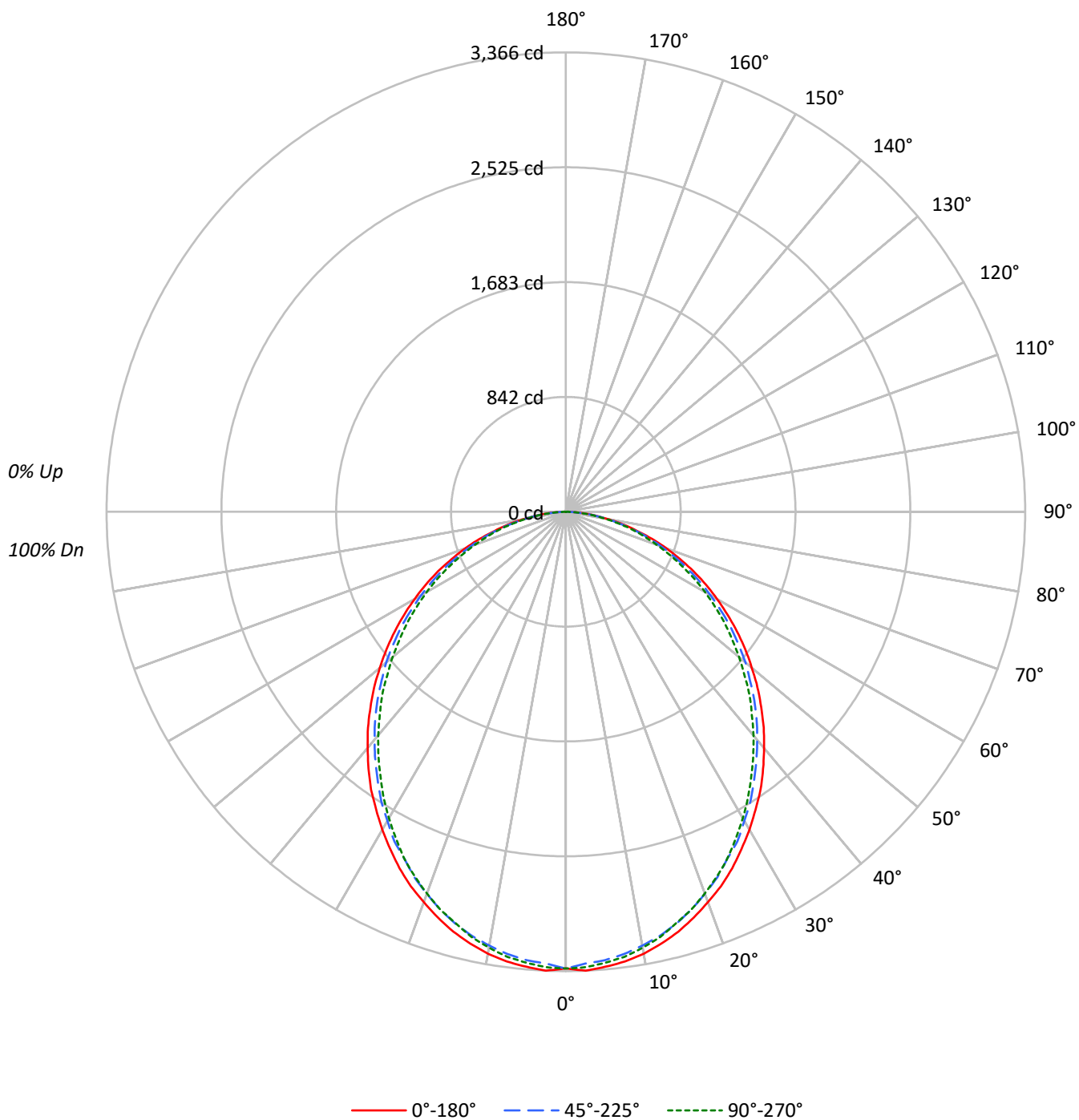
Lumens per Lamp: N/A
Luminaire Lumens: 8514.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 100.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931149

CATALOG NUMBER: DFN2DS-SQ4F0-100DS935-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931149

CATALOG NUMBER: DFN2DS-SQ4F0-100DS935-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°	2348	2348	2348
5°	2357	2323	2337
10°	2343	2300	2311
15°	2314	2270	2267
20°	2273	2225	2223
25°	2232	2170	2170
30°	2180	2120	2101
35°	2131	2059	2029
40°	2069	1998	1960
45°	2009	1938	1890
50°	1942	1876	1809
55°	1874	1803	1736
60°	1797	1716	1653
65°	1715	1630	1555
70°	1611	1525	1453
75°	1465	1404	1370
80°	1301	1261	1196
85°	1061	1011	907

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2009 cd/sqm

TEST NUMBER: P931149

CATALOG NUMBER: DFN2DS-SQ4F0-100DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	3.7
10°-20°	886.2	10.4
20°-30°	1302.3	15.3
30°-40°	1512.5	17.8
40°-50°	1510.7	17.7
50°-60°	1317.3	15.5
60°-70°	973.7	11.4
70°-80°	550.9	6.5
80°-90°	145.4	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°	2503.4	29.4
0°-40°	4016.0	47.2
0°-60°	6843.9	80.4
0°-90°	8514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3346	3334	3298	3324	3318	318
15°	3186	3166	3124	3137	3121	897
25°	2883	2857	2803	2809	2803	1327
35°	2487	2455	2404	2384	2368	1553
45°	2024	2002	1953	1918	1905	1562
55°	1532	1512	1474	1435	1419	1369
65°	1033	1014	982	952	936	1021
75°	540	534	518	499	505	577
85°	132	129	126	116	113	155
90°	0	0	0	0	0	

TEST NUMBER: P931149

CATALOG NUMBER: DFN2DS-SQ4F0-100DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3346.3	3346.3	3346.3	3346.3	3346.3
2.5°	3365.8	3349.7	3314.2	3346.3	3340.2
5°	3346.3	3333.7	3298.2	3323.8	3317.6
7.5°	3323.8	3304.6	3269.1	3295.1	3288.6
10°	3288.6	3266.1	3227.5	3253.1	3243.6
12.5°	3240.1	3221.0	3182.4	3198.5	3192.0
15°	3185.5	3166.4	3124.4	3137.4	3121.4
17.5°	3117.9	3098.8	3056.8	3072.9	3056.8
20°	3043.8	3024.7	2979.6	2989.2	2976.5
22.5°	2970.1	2941.1	2899.1	2899.1	2892.6
25°	2883.1	2857.4	2802.8	2808.9	2802.8
27.5°	2786.4	2763.9	2722.2	2712.7	2696.6
30°	2690.2	2664.2	2616.0	2606.5	2593.5
32.5°	2587.1	2568.0	2516.4	2496.9	2483.9
35°	2487.4	2455.3	2403.7	2384.3	2368.2
37.5°	2374.7	2345.6	2294.1	2271.6	2255.5
40°	2259.0	2233.0	2181.5	2152.8	2139.9
42.5°	2146.3	2120.3	2069.2	2036.7	2017.6
45°	2024.1	2001.6	1953.1	1917.9	1905.0
47.5°	1905.0	1882.5	1830.9	1795.3	1776.2
50°	1779.3	1763.3	1718.2	1673.1	1657.1
52.5°	1657.1	1634.6	1592.9	1557.5	1534.9
55°	1531.8	1512.4	1473.8	1435.2	1419.2
57.5°	1406.2	1390.1	1348.1	1309.6	1296.6
60°	1280.5	1267.9	1222.8	1187.3	1177.8
62.5°	1158.3	1135.8	1103.7	1071.6	1058.7
65°	1033.0	1013.6	981.5	952.4	936.5
67.5°	904.4	888.0	859.3	836.8	823.8
70°	785.2	772.2	743.2	720.7	708.0
72.5°	663.0	650.0	634.0	611.5	601.8
75°	540.4	534.3	517.9	498.8	505.2
77.5°	431.2	418.2	411.7	402.1	392.6
80°	321.9	318.5	312.0	302.5	296.0
82.5°	218.9	218.9	215.8	202.8	202.8
85°	131.8	128.7	125.6	115.8	112.7
87.5°	58.0	51.5	45.1	35.5	32.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931149

CATALOG NUMBER: DFN2DS-SQ4F0-100DS935-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	14.25	15.86	14.61	16.17	16.49	13.80	15.41	14.17	15.73	16.04
	3H	16.00	17.45	16.38	17.78	18.14	15.51	16.96	15.88	17.29	17.65
	4H	16.64	18.01	17.04	18.36	18.74	16.15	17.52	16.55	17.87	18.24
	6H	17.11	18.38	17.52	18.75	19.14	16.61	17.88	17.02	18.25	18.64
	8H	17.26	18.47	17.68	18.86	19.26	16.75	17.96	17.18	18.35	18.75
	12H	17.35	18.51	17.78	18.89	19.32	16.83	18.00	17.26	18.38	18.81
4H	2H	14.81	16.18	15.21	16.53	16.90	14.46	15.82	14.85	16.17	16.55
	3H	16.78	17.93	17.19	18.33	18.73	16.38	17.52	16.79	17.92	18.32
	4H	17.56	18.60	17.99	19.01	19.45	17.14	18.17	17.57	18.59	19.02
	6H	18.16	19.06	18.61	19.50	19.96	17.72	18.63	18.18	19.07	19.53
	8H	18.35	19.19	18.81	19.64	20.10	17.91	18.75	18.37	19.20	19.66
	12H	18.48	19.24	18.96	19.71	20.18	18.03	18.79	18.51	19.26	19.73
8H	4H	17.83	18.68	18.29	19.12	19.59	17.46	18.31	17.92	18.75	19.21
	6H	18.55	19.25	19.04	19.74	20.21	18.17	18.87	18.66	19.36	19.83
	8H	18.81	19.44	19.32	19.94	20.43	18.42	19.05	18.93	19.55	20.04
	12H	19.01	19.56	19.51	20.06	20.62	18.59	19.15	19.10	19.64	20.20
12H	4H	17.86	18.62	18.34	19.10	19.56	17.49	18.25	17.98	18.73	19.20
	6H	18.59	19.23	19.10	19.73	20.22	18.22	18.86	18.73	19.36	19.85
	8H	18.91	19.47	19.41	19.96	20.52	18.53	19.09	19.04	19.58	20.14