

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: P930883

Luminaire Tested: DFN2DS-SQ2F0-070DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930883
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-SQ2F0-070DS950-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

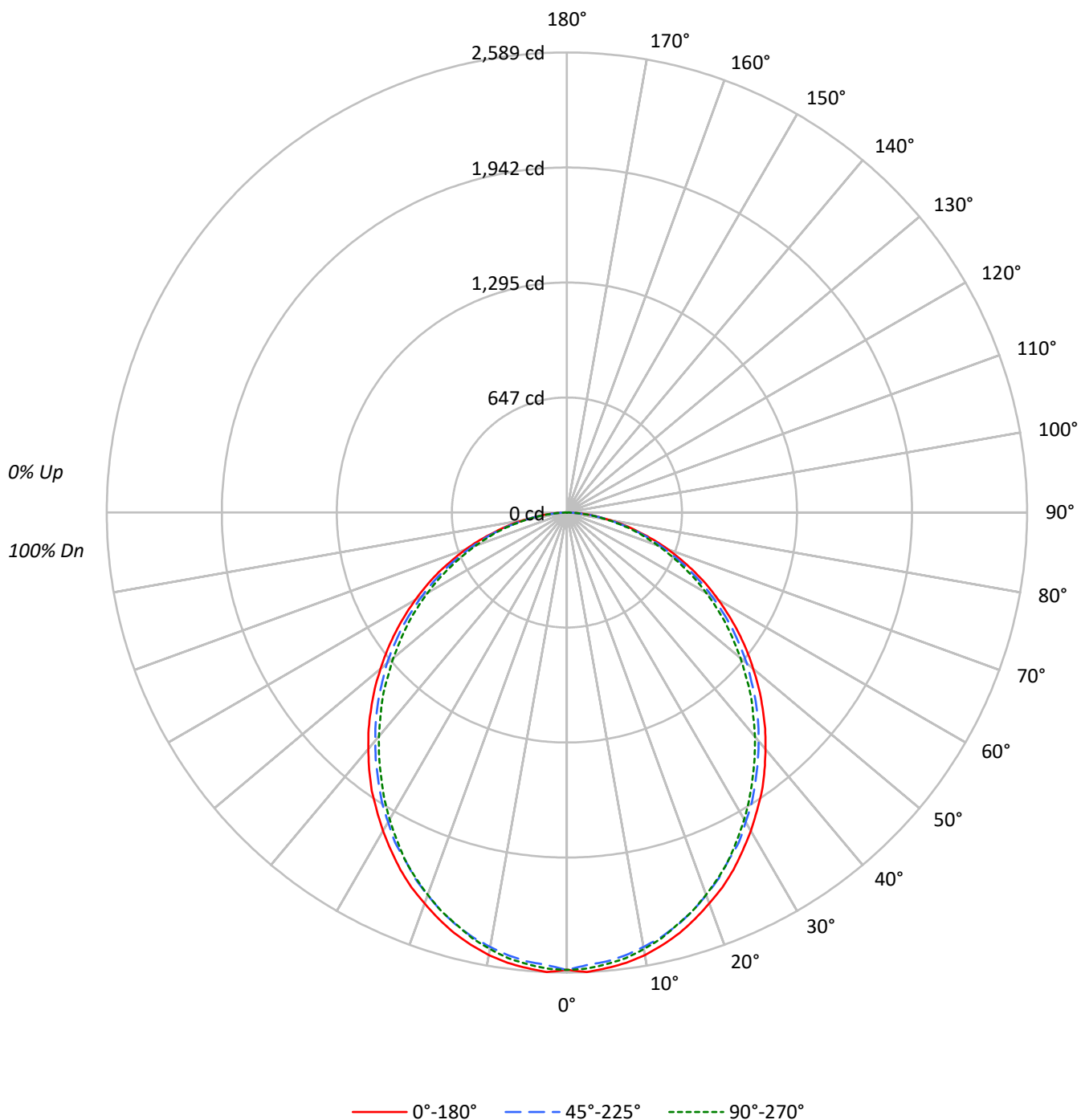
Lumens per Lamp: N/A
Luminaire Lumens: 6548.9 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
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: P930883

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930883

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-FLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5660	5660	5660
5°	5681	5600	5633
10°	5648	5543	5571
15°	5578	5471	5466
20°	5478	5363	5357
25°	5380	5231	5231
30°	5254	5109	5065
35°	5136	4963	4890
40°	4988	4816	4724
45°	4841	4672	4556
50°	4682	4521	4360
55°	4517	4346	4185
60°	4332	4137	3984
65°	4135	3928	3748
70°	3883	3675	3501
75°	3532	3384	3302
80°	3135	3039	2883
85°	2558	2440	2187

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4841 cd/sqm

TEST NUMBER: P930883

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.3	3.7
10°-20°	681.6	10.4
20°-30°	1001.7	15.3
30°-40°	1163.4	17.8
40°-50°	1162.0	17.7
50°-60°	1013.2	15.5
60°-70°	749.0	11.4
70°-80°	423.8	6.5
80°-90°	111.9	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°	1925.6	29.4
0°-40°	3089.0	47.2
0°-60°	5264.2	80.4
0°-90°	6548.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6548.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2574	2574	2574	2574	2574	
5°	2574	2564	2537	2557	2552	244
15°	2450	2436	2403	2413	2401	690
25°	2218	2198	2156	2161	2156	1020
35°	1913	1889	1849	1834	1822	1195
45°	1557	1540	1502	1475	1465	1202
55°	1178	1163	1134	1104	1092	1053
65°	795	780	755	733	720	786
75°	416	411	398	384	389	444
85°	101	99	97	89	87	119
90°	0	0	0	0	0	

TEST NUMBER: P930883

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2573.9	2573.9	2573.9	2573.9	2573.9
2.5°	2588.9	2576.5	2549.2	2573.9	2569.2
5°	2573.9	2564.3	2536.9	2556.6	2551.9
7.5°	2556.6	2541.9	2514.6	2534.6	2529.6
10°	2529.6	2512.2	2482.5	2502.3	2494.9
12.5°	2492.2	2477.6	2447.9	2460.2	2455.2
15°	2450.3	2435.5	2403.2	2413.2	2400.9
17.5°	2398.2	2383.6	2351.3	2363.6	2351.3
20°	2341.2	2326.6	2291.9	2299.3	2289.5
22.5°	2284.5	2262.2	2229.9	2229.9	2224.9
25°	2217.6	2197.9	2155.9	2160.6	2155.9
27.5°	2143.3	2126.0	2093.9	2086.6	2074.2
30°	2069.3	2049.2	2012.3	2004.9	1994.9
32.5°	1989.9	1975.2	1935.5	1920.6	1910.6
35°	1913.2	1888.6	1848.9	1834.0	1821.6
37.5°	1826.6	1804.3	1764.6	1747.3	1734.9
40°	1737.6	1717.6	1677.9	1655.9	1645.9
42.5°	1650.9	1631.0	1591.6	1566.6	1551.9
45°	1556.9	1539.6	1502.3	1475.2	1465.2
47.5°	1465.2	1447.9	1408.2	1380.9	1366.3
50°	1368.6	1356.3	1321.6	1287.0	1274.6
52.5°	1274.6	1257.3	1225.3	1198.0	1180.6
55°	1178.2	1163.3	1133.6	1103.9	1091.6
57.5°	1081.6	1069.3	1036.9	1007.3	997.4
60°	985.0	975.2	940.7	913.3	906.0
62.5°	890.9	873.7	849.0	824.3	814.3
65°	794.7	779.6	755.0	732.7	720.3
67.5°	695.6	683.0	660.9	643.6	633.6
70°	603.9	594.0	571.6	554.3	544.6
72.5°	509.9	500.0	487.6	470.3	463.0
75°	415.7	411.0	398.3	383.7	388.7
77.5°	331.7	321.7	316.7	309.3	302.0
80°	247.6	245.0	240.0	232.7	227.7
82.5°	168.3	168.3	165.9	156.0	156.0
85°	101.4	99.0	96.7	89.0	86.7
87.5°	44.6	39.7	34.7	27.3	24.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930883

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-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	17.31	18.92	17.67	19.23	19.54	16.86	18.47	17.23	18.79	19.10
	3H	19.06	20.51	19.43	20.84	21.20	18.56	20.02	18.94	20.34	20.71
	4H	19.70	21.07	20.10	21.42	21.79	19.21	20.58	19.60	20.92	21.30
	6H	20.17	21.44	20.58	21.80	22.19	19.67	20.94	20.08	21.30	21.69
	8H	20.31	21.52	20.74	21.91	22.31	19.81	21.02	20.24	21.41	21.81
	12H	20.40	21.56	20.83	21.95	22.37	19.89	21.05	20.32	21.43	21.86
4H	2H	17.87	19.23	18.26	19.58	19.96	17.51	18.88	17.91	19.23	19.61
	3H	19.84	20.99	20.25	21.38	21.78	19.43	20.58	19.84	20.98	21.38
	4H	20.62	21.65	21.05	22.07	22.50	20.19	21.23	20.62	21.64	22.08
	6H	21.21	22.12	21.67	22.56	23.02	20.78	21.69	21.24	22.13	22.58
	8H	21.40	22.25	21.86	22.69	23.16	20.97	21.81	21.43	22.25	22.72
	12H	21.54	22.29	22.02	22.77	23.24	21.08	21.84	21.56	22.32	22.79
8H	4H	20.89	21.74	21.35	22.18	22.64	20.52	21.36	20.98	21.81	22.27
	6H	21.60	22.31	22.10	22.80	23.27	21.22	21.93	21.72	22.41	22.89
	8H	21.86	22.49	22.37	23.00	23.49	21.47	22.10	21.98	22.61	23.10
	12H	22.06	22.62	22.57	23.11	23.67	21.65	22.21	22.16	22.70	23.26
12H	4H	20.92	21.68	21.40	22.15	22.62	20.55	21.31	21.03	21.79	22.26
	6H	21.65	22.28	22.16	22.79	23.27	21.28	21.91	21.79	22.42	22.91
	8H	21.96	22.52	22.47	23.01	23.57	21.59	22.14	22.09	22.63	23.20