

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: P930989

Luminaire Tested: DFN2DS-SQ3F0-080DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930989
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-SQ3F0-080DS940-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

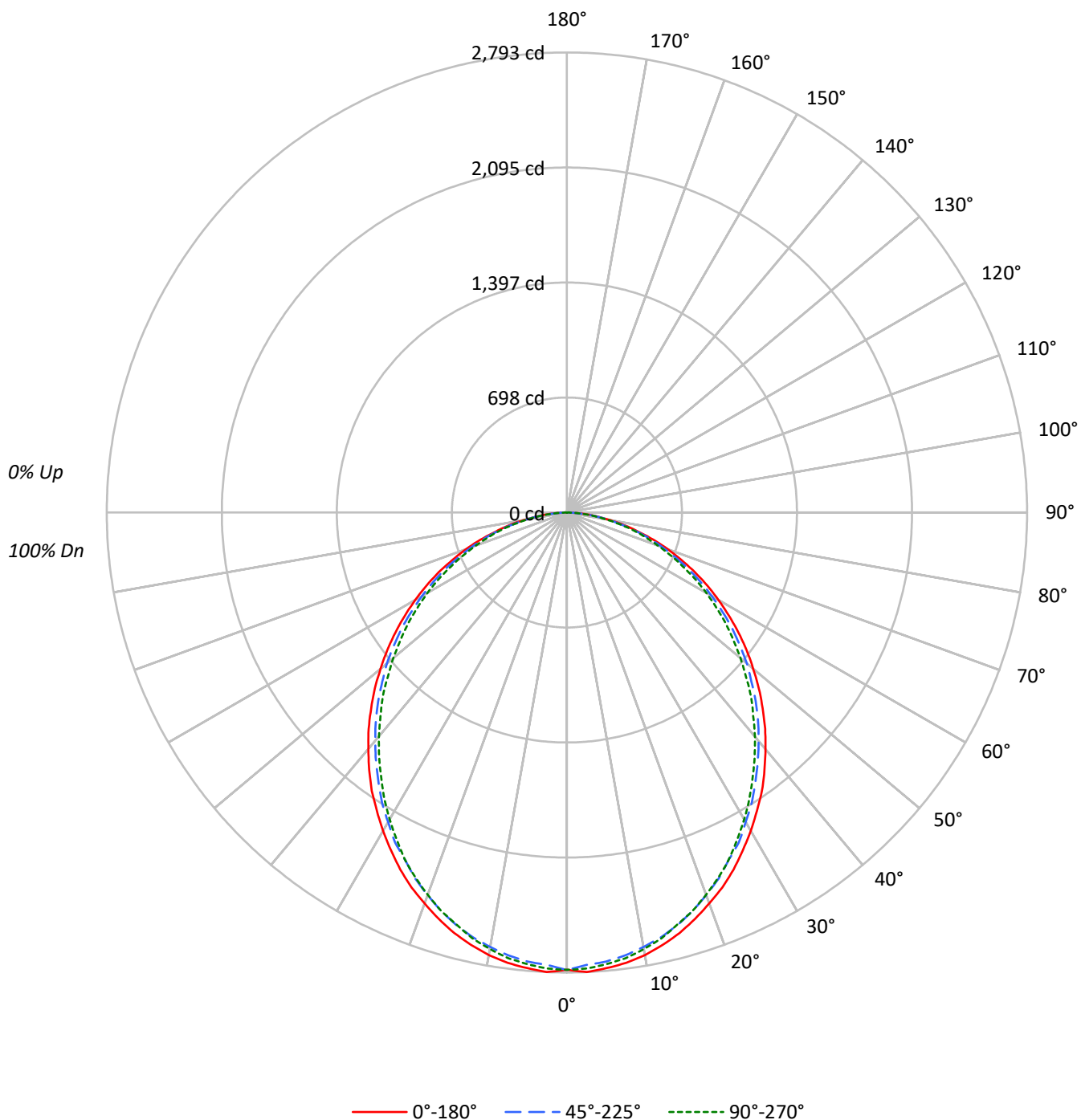
Lumens per Lamp: N/A
Luminaire Lumens: 7064.6 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 82
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930989

CATALOG NUMBER: DFN2DS-SQ3F0-080DS940-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°	3181	3181	3181
5°	3194	3148	3166
10°	3175	3116	3131
15°	3136	3075	3072
20°	3080	3015	3012
25°	3024	2940	2940
30°	2953	2872	2847
35°	2887	2790	2749
40°	2804	2707	2656
45°	2721	2626	2561
50°	2632	2541	2451
55°	2539	2443	2352
60°	2435	2325	2240
65°	2324	2208	2107
70°	2183	2066	1968
75°	1985	1903	1856
80°	1763	1708	1621
85°	1438	1371	1229

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2721 cd/sqm

TEST NUMBER: P930989

CATALOG NUMBER: DFN2DS-SQ3F0-080DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	3.7
10°-20°	735.3	10.4
20°-30°	1080.6	15.3
30°-40°	1255.1	17.8
40°-50°	1253.5	17.7
50°-60°	1093.0	15.5
60°-70°	808.0	11.4
70°-80°	457.1	6.5
80°-90°	120.7	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°	2077.3	29.4
0°-40°	3332.3	47.2
0°-60°	5678.8	80.4
0°-90°	7064.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7064.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2777	2777	2777	2777	2777	
5°	2777	2766	2737	2758	2753	264
15°	2643	2627	2592	2603	2590	744
25°	2392	2371	2326	2331	2326	1101
35°	2064	2037	1994	1978	1965	1289
45°	1680	1661	1621	1591	1581	1296
55°	1271	1255	1223	1191	1178	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	129
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ3F0-080DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2776.6	2776.6	2776.6	2776.6	2776.6
2.5°	2792.8	2779.5	2750.0	2776.6	2771.5
5°	2776.6	2766.2	2736.7	2758.0	2752.9
7.5°	2758.0	2742.1	2712.7	2734.2	2728.8
10°	2728.8	2710.1	2678.1	2699.3	2691.4
12.5°	2688.6	2672.7	2640.7	2654.0	2648.6
15°	2643.3	2627.4	2592.5	2603.3	2590.0
17.5°	2587.2	2571.3	2536.4	2549.8	2536.4
20°	2525.7	2509.8	2472.4	2480.4	2469.9
22.5°	2464.5	2440.4	2405.5	2405.5	2400.2
25°	2392.3	2371.0	2325.7	2330.8	2325.7
27.5°	2312.1	2293.4	2258.8	2250.9	2237.6
30°	2232.2	2210.6	2170.8	2162.8	2152.0
32.5°	2146.7	2130.8	2088.0	2071.8	2061.1
35°	2063.9	2037.3	1994.5	1978.4	1965.1
37.5°	1970.4	1946.3	1903.6	1884.9	1871.6
40°	1874.4	1852.9	1810.1	1786.3	1775.5
42.5°	1781.0	1759.4	1716.9	1690.0	1674.2
45°	1679.5	1660.8	1620.6	1591.4	1580.7
47.5°	1580.7	1562.0	1519.2	1489.7	1473.9
50°	1476.4	1463.1	1425.7	1388.3	1375.0
52.5°	1375.0	1356.3	1321.8	1292.3	1273.6
55°	1271.0	1254.9	1222.9	1190.9	1177.5
57.5°	1166.8	1153.5	1118.7	1086.6	1075.8
60°	1062.6	1052.1	1014.6	985.2	977.3
62.5°	961.1	942.5	915.8	889.2	878.4
65°	857.2	841.1	814.4	790.3	777.0
67.5°	750.4	736.8	713.0	694.3	683.5
70°	651.5	640.7	616.7	598.0	587.5
72.5°	550.1	539.4	526.0	507.4	499.4
75°	448.4	443.3	429.8	413.9	419.2
77.5°	357.8	347.0	341.6	333.7	325.8
80°	267.2	264.3	258.9	251.0	245.6
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.4	106.8	104.3	96.1	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
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	15.30	16.91	15.67	17.23	17.54	14.86	16.47	15.22	16.78	17.10
	3H	17.05	18.51	17.43	18.83	19.20	16.56	18.02	16.94	18.34	18.70
	4H	17.70	19.07	18.10	19.42	19.79	17.20	18.57	17.60	18.92	19.30
	6H	18.17	19.44	18.58	19.80	20.19	17.67	18.94	18.08	19.30	19.69
	8H	18.31	19.52	18.74	19.91	20.31	17.81	19.02	18.23	19.41	19.81
	12H	18.40	19.56	18.83	19.94	20.37	17.89	19.05	18.32	19.43	19.86
4H	2H	15.86	17.23	16.26	17.58	17.96	15.51	16.88	15.91	17.23	17.60
	3H	17.84	18.99	18.25	19.38	19.78	17.43	18.58	17.84	18.98	19.38
	4H	18.62	19.65	19.05	20.07	20.50	18.19	19.23	18.62	19.64	20.08
	6H	19.21	20.12	19.67	20.56	21.01	18.78	19.68	19.23	20.13	20.58
	8H	19.40	20.25	19.86	20.69	21.16	18.96	19.81	19.42	20.25	20.72
	12H	19.53	20.29	20.01	20.77	21.24	19.08	19.84	19.56	20.32	20.79
8H	4H	18.89	19.74	19.35	20.18	20.64	18.51	19.36	18.98	19.80	20.27
	6H	19.60	20.31	20.10	20.79	21.27	19.22	19.92	19.72	20.41	20.89
	8H	19.86	20.49	20.37	21.00	21.49	19.47	20.10	19.98	20.61	21.09
	12H	20.06	20.62	20.57	21.11	21.67	19.65	20.21	20.16	20.70	21.26
12H	4H	18.91	19.67	19.40	20.15	20.62	18.55	19.31	19.03	19.79	20.26
	6H	19.65	20.28	20.16	20.79	21.27	19.28	19.91	19.79	20.42	20.90
	8H	19.96	20.52	20.47	21.01	21.57	19.58	20.14	20.09	20.63	21.19