

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: P930863

Luminaire Tested: DFN2DS-SQ2F0-060DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930863
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-SQ2F0-060DS940-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

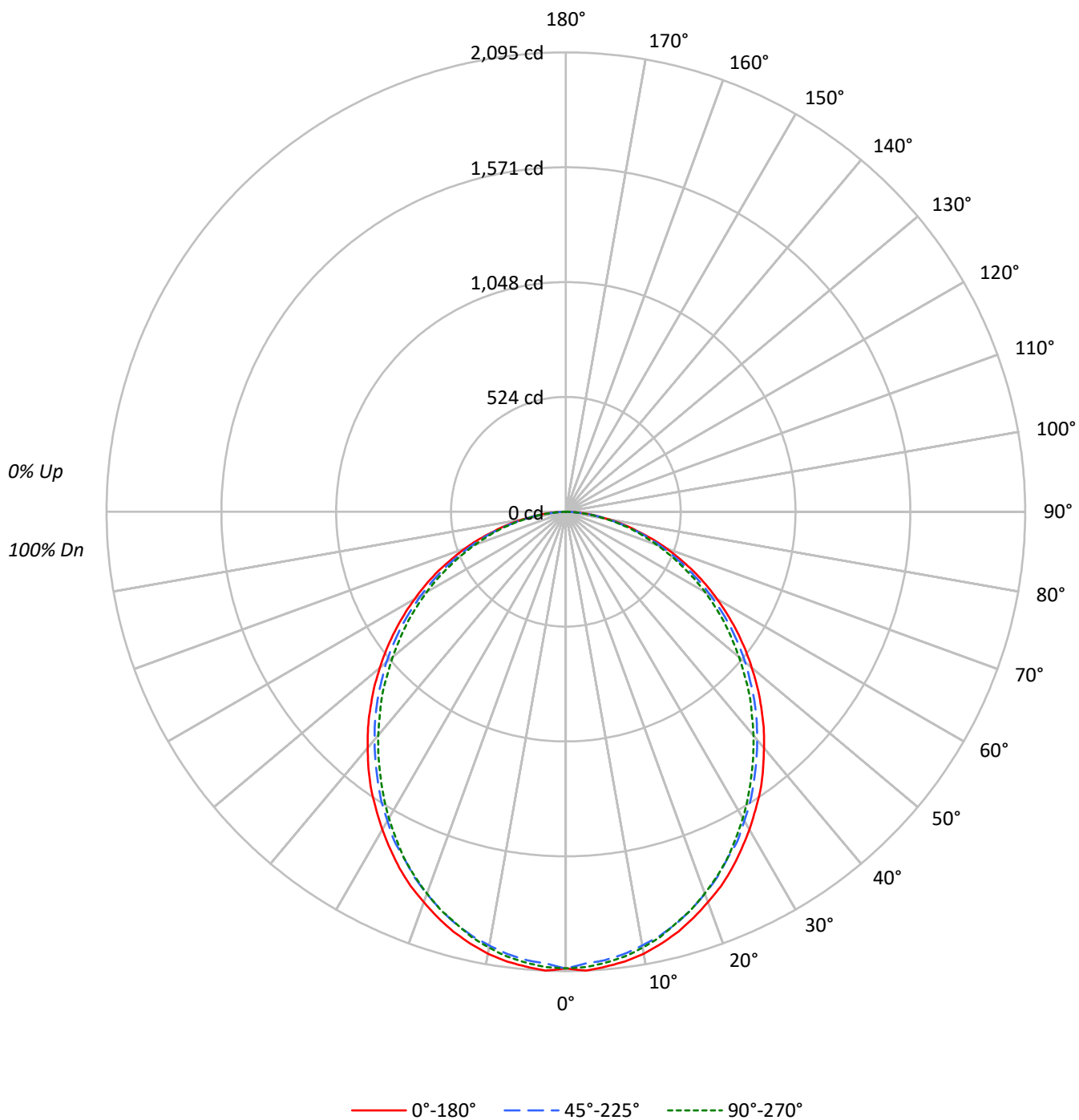
Lumens per Lamp: N/A
Luminaire Lumens: 5298.4 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 58.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930863

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930863

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-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°	4579	4579	4579
5°	4597	4530	4557
10°	4570	4485	4507
15°	4513	4426	4422
20°	4433	4339	4335
25°	4353	4232	4232
30°	4251	4134	4098
35°	4155	4016	3956
40°	4035	3897	3823
45°	3917	3780	3687
50°	3788	3658	3528
55°	3655	3516	3386
60°	3505	3347	3224
65°	3345	3178	3032
70°	3141	2973	2833
75°	2857	2738	2671
80°	2536	2459	2333
85°	2069	1970	1769

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3917 cd/sqm

TEST NUMBER: P930863

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.0	3.7
10°-20°	551.5	10.4
20°-30°	810.5	15.3
30°-40°	941.3	17.8
40°-50°	940.1	17.7
50°-60°	819.8	15.5
60°-70°	606.0	11.4
70°-80°	342.9	6.5
80°-90°	90.5	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°	1558.0	29.4
0°-40°	2499.3	47.2
0°-60°	4259.1	80.4
0°-90°	5298.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5298.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2082	2082	2082	2082	2082	
5°	2082	2075	2052	2068	2065	198
15°	1982	1970	1944	1952	1942	558
25°	1794	1778	1744	1748	1744	826
35°	1548	1528	1496	1484	1474	967
45°	1260	1246	1215	1194	1186	972
55°	953	941	917	893	883	852
65°	643	631	611	593	583	636
75°	336	332	322	310	314	359
85°	82	80	78	72	70	96
90°	0	0	0	0	0	

TEST NUMBER: P930863

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2082.5	2082.5	2082.5	2082.5	2082.5
2.5°	2094.6	2084.6	2062.5	2082.5	2078.6
5°	2082.5	2074.6	2052.5	2068.5	2064.6
7.5°	2068.5	2056.6	2034.5	2050.6	2046.6
10°	2046.6	2032.6	2008.5	2024.5	2018.5
12.5°	2016.5	2004.5	1980.5	1990.5	1986.5
15°	1982.4	1970.5	1944.4	1952.5	1942.5
17.5°	1940.4	1928.5	1902.4	1912.3	1902.4
20°	1894.3	1882.4	1854.3	1860.3	1852.4
22.5°	1848.4	1830.3	1804.2	1804.2	1800.1
25°	1794.2	1778.3	1744.2	1748.1	1744.2
27.5°	1734.0	1720.0	1694.1	1688.2	1678.2
30°	1674.2	1658.0	1628.1	1622.1	1614.0
32.5°	1610.0	1598.1	1566.0	1553.9	1545.8
35°	1548.0	1528.0	1495.9	1483.8	1473.8
37.5°	1477.9	1459.8	1427.7	1413.6	1403.7
40°	1405.8	1389.6	1357.6	1339.8	1331.7
42.5°	1335.7	1319.5	1287.7	1267.5	1255.6
45°	1259.7	1245.6	1215.4	1193.6	1185.5
47.5°	1185.5	1171.5	1139.4	1117.3	1105.4
50°	1107.3	1097.3	1069.3	1041.2	1031.2
52.5°	1031.2	1017.2	991.3	969.2	955.2
55°	953.3	941.1	917.2	893.2	883.2
57.5°	875.1	865.2	839.0	815.0	806.9
60°	796.9	789.1	761.1	738.9	733.0
62.5°	720.8	706.8	686.8	666.9	658.8
65°	642.9	630.8	610.8	592.7	582.7
67.5°	562.8	552.6	534.8	520.7	512.6
70°	488.6	480.6	462.5	448.5	440.6
72.5°	412.6	404.5	394.5	380.5	374.6
75°	336.3	332.5	322.3	310.4	314.4
77.5°	268.3	260.3	256.2	250.3	244.3
80°	200.3	198.2	194.2	188.2	184.2
82.5°	136.2	136.2	134.2	126.2	126.2
85°	82.0	80.1	78.1	72.0	70.1
87.5°	36.1	32.1	28.0	22.1	20.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930863

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-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	16.57	18.18	16.93	18.49	18.81	16.12	17.74	16.49	18.05	18.36
	3H	18.32	19.77	18.70	20.10	20.46	17.83	19.28	18.20	19.61	19.97
	4H	18.97	20.33	19.36	20.68	21.06	18.47	19.84	18.87	20.19	20.56
	6H	19.43	20.70	19.85	21.07	21.46	18.93	20.20	19.34	20.57	20.96
	8H	19.58	20.79	20.00	21.18	21.58	19.07	20.29	19.50	20.67	21.07
	12H	19.67	20.83	20.10	21.21	21.64	19.16	20.32	19.58	20.70	21.13
4H	2H	17.13	18.50	17.53	18.85	19.22	16.78	18.15	17.17	18.49	18.87
	3H	19.10	20.25	19.51	20.65	21.05	18.70	19.84	19.11	20.24	20.64
	4H	19.88	20.92	20.31	21.33	21.77	19.46	20.49	19.89	20.91	21.34
	6H	20.48	21.38	20.93	21.82	22.28	20.04	20.95	20.50	21.39	21.85
	8H	20.67	21.51	21.13	21.96	22.42	20.23	21.08	20.69	21.52	21.98
	12H	20.80	21.56	21.28	22.03	22.50	20.35	21.11	20.83	21.58	22.05
8H	4H	20.15	21.00	20.62	21.44	21.91	19.78	20.63	20.24	21.07	21.53
	6H	20.87	21.57	21.36	22.06	22.54	20.49	21.19	20.98	21.68	22.15
	8H	21.13	21.76	21.64	22.27	22.75	20.74	21.37	21.25	21.87	22.36
	12H	21.33	21.89	21.83	22.38	22.94	20.91	21.47	21.42	21.96	22.52
12H	4H	20.18	20.94	20.66	21.42	21.89	19.82	20.58	20.30	21.05	21.52
	6H	20.91	21.55	21.42	22.05	22.54	20.54	21.18	21.05	21.68	22.17
	8H	21.23	21.79	21.73	22.28	22.84	20.85	21.41	21.36	21.90	22.46