

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: P930812

Luminaire Tested: DFN2DS-SQ2F0-030DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930812
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-SQ2F0-030DS950-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

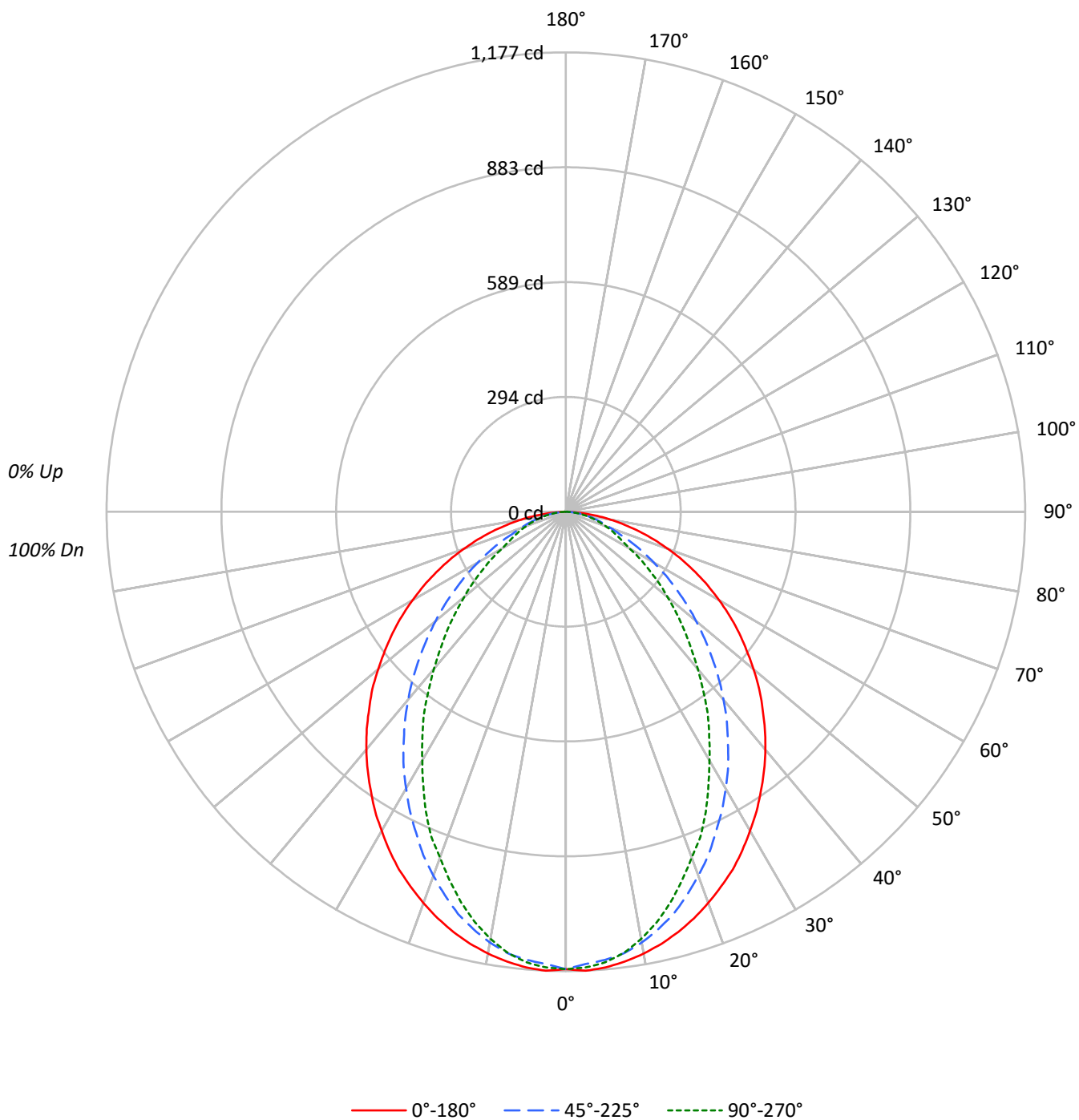
Lumens per Lamp: N/A
Luminaire Lumens: 2409.7 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 26.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930812

CATALOG NUMBER: DFN2DS-SQ2F0-030DS950-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			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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2576	2576	2576
5°	2586	2544	2558
10°	2566	2503	2481
15°	2537	2428	2358
20°	2496	2322	2206
25°	2454	2202	2058
30°	2396	2078	1868
35°	2340	1944	1702
40°	2283	1805	1510
45°	2216	1649	1335
50°	2148	1491	1164
55°	2077	1321	1000
60°	1996	1143	830
65°	1903	960	755
70°	1793	790	695
75°	1657	721	649
80°	1464	643	591
85°	1148	507	507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2216 cd/sqm

TEST NUMBER: P930812

CATALOG NUMBER: DFN2DS-SQ2F0-030DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.8	4.6
10°-20°	301.5	12.5
20°-30°	423.2	17.6
30°-40°	461.4	19.1
40°-50°	424.0	17.6
50°-60°	333.0	13.8
60°-70°	216.8	9.0
70°-80°	111.6	4.6
80°-90°	28.5	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°	834.5	34.6
0°-40°	1295.9	53.8
0°-60°	2052.9	85.2
0°-90°	2409.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2409.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1172	1166	1153	1162	1159	111
15°	1114	1103	1067	1047	1036	314
25°	1012	978	908	864	848	465
35°	872	818	724	657	634	546
45°	713	642	530	455	429	550
55°	542	459	344	281	261	484
65°	366	280	184	148	145	363
75°	195	121	85	77	76	206
85°	46	23	20	20	20	55
90°	0	0	0	0	0	

TEST NUMBER: P930812

CATALOG NUMBER: DFN2DS-SQ2F0-030DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1171.7	1171.7	1171.7	1171.7	1171.7
2.5°	1177.0	1171.7	1160.0	1170.7	1168.6
5°	1171.7	1166.4	1152.6	1162.2	1158.9
7.5°	1162.2	1155.8	1141.0	1145.2	1139.9
10°	1149.4	1142.0	1120.9	1117.6	1111.3
12.5°	1133.5	1124.0	1095.3	1089.0	1077.3
15°	1114.4	1102.7	1066.7	1046.6	1036.0
17.5°	1092.1	1075.2	1030.6	1007.4	990.4
20°	1066.7	1045.5	992.4	966.1	942.6
22.5°	1039.2	1014.7	953.2	917.2	901.3
25°	1011.6	977.6	907.7	864.2	848.2
27.5°	978.7	942.6	865.2	815.4	791.0
30°	943.8	903.4	818.6	764.6	735.9
32.5°	909.8	861.0	774.1	710.5	683.9
35°	871.7	817.5	724.2	657.4	634.1
37.5°	834.5	776.1	677.6	604.3	578.0
40°	795.3	731.7	628.8	553.5	526.0
42.5°	755.0	687.2	580.0	501.5	475.1
45°	712.6	641.5	530.2	454.8	429.4
47.5°	672.3	597.1	482.5	407.1	383.9
50°	627.8	552.4	435.8	362.6	340.4
52.5°	584.2	504.7	391.3	321.3	301.2
55°	541.8	459.1	344.5	281.0	260.9
57.5°	498.4	413.5	303.3	243.9	226.9
60°	453.8	369.0	259.8	205.7	188.8
62.5°	410.4	325.6	222.6	171.8	163.4
65°	365.8	279.9	184.5	148.5	145.2
67.5°	323.5	237.5	148.5	130.4	127.2
70°	278.9	196.2	122.9	112.4	108.1
72.5°	236.4	157.9	102.8	94.4	92.2
75°	195.0	120.9	84.9	77.4	76.4
77.5°	153.8	85.8	66.8	62.6	60.4
80°	115.6	61.5	50.8	46.7	46.7
82.5°	80.5	41.4	35.0	32.9	32.9
85°	45.5	23.2	20.1	20.1	20.1
87.5°	17.0	8.4	8.4	7.5	7.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930812

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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	14.52	16.04	14.89	16.36	16.67	10.48	12.00	10.85	12.32	12.63
	3H	16.29	17.65	16.67	17.98	18.34	11.75	13.11	12.13	13.44	13.80
	4H	16.95	18.23	17.35	18.58	18.96	12.25	13.53	12.65	13.88	14.26
	6H	17.44	18.63	17.86	18.99	19.38	12.63	13.81	13.04	14.18	14.57
	8H	17.61	18.73	18.03	19.12	19.53	12.76	13.88	13.18	14.27	14.67
	12H	17.71	18.79	18.14	19.17	19.60	12.84	13.92	13.27	14.30	14.73
4H	2H	14.63	15.91	15.03	16.26	16.63	11.18	12.46	11.58	12.81	13.19
	3H	16.56	17.62	16.97	18.02	18.42	12.62	13.68	13.03	14.08	14.49
	4H	17.31	18.27	17.74	18.68	19.12	13.22	14.18	13.65	14.59	15.03
	6H	17.90	18.73	18.36	19.18	19.64	13.71	14.54	14.17	14.98	15.44
	8H	18.12	18.89	18.58	19.34	19.80	13.87	14.65	14.34	15.09	15.56
	12H	18.27	18.96	18.75	19.44	19.91	13.99	14.68	14.47	15.16	15.63
8H	4H	17.33	18.11	17.80	18.55	19.02	13.58	14.35	14.04	14.80	15.26
	6H	17.97	18.61	18.47	19.10	19.58	14.16	14.80	14.66	15.30	15.77
	8H	18.22	18.80	18.74	19.31	19.80	14.38	14.96	14.90	15.47	15.96
	12H	18.42	18.93	18.93	19.43	19.99	14.56	15.07	15.07	15.56	16.13
12H	4H	17.32	18.01	17.80	18.49	18.96	13.62	14.31	14.10	14.79	15.26
	6H	17.95	18.53	18.47	19.04	19.53	14.23	14.80	14.74	15.31	15.80
	8H	18.24	18.75	18.75	19.24	19.80	14.50	15.01	15.01	15.50	16.07