

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: P930841

Luminaire Tested: DFN2DS-SQ2F0-050DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930841
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-SQ2F0-050DS930-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

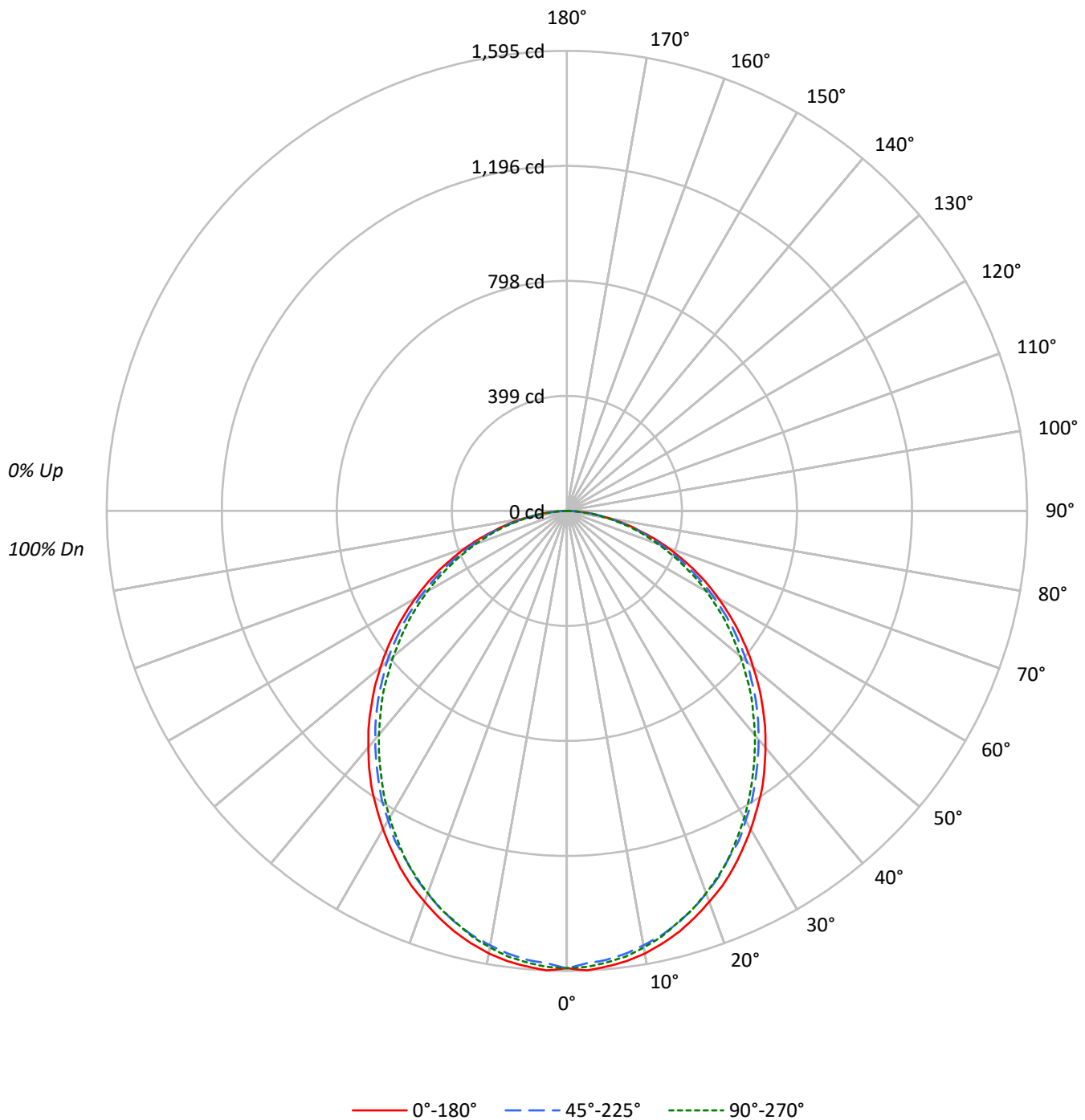
Lumens per Lamp: N/A
Luminaire Lumens: 4034.2 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 47.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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°	3487	3487	3487
5°	3500	3450	3470
10°	3479	3415	3432
15°	3436	3370	3367
20°	3375	3304	3300
25°	3314	3222	3222
30°	3237	3147	3120
35°	3164	3057	3012
40°	3073	2967	2910
45°	2983	2878	2807
50°	2884	2785	2686
55°	2782	2677	2578
60°	2669	2549	2454
65°	2547	2419	2309
70°	2392	2264	2157
75°	2176	2085	2034
80°	1932	1872	1777
85°	1574	1501	1347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2983 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	3.7
10°-20°	419.9	10.4
20°-30°	617.1	15.3
30°-40°	716.7	17.8
40°-50°	715.8	17.7
50°-60°	624.2	15.5
60°-70°	461.4	11.4
70°-80°	261.0	6.5
80°-90°	68.9	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°	1186.2	29.4
0°-40°	1902.9	47.2
0°-60°	3242.9	80.4
0°-90°	4034.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4034.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1586	1586	1586	1586	1586	
5°	1586	1580	1563	1575	1572	151
15°	1509	1500	1480	1487	1479	425
25°	1366	1354	1328	1331	1328	629
35°	1179	1163	1139	1130	1122	736
45°	959	948	925	909	903	740
55°	726	717	698	680	672	649
65°	490	480	465	451	444	484
75°	256	253	245	236	239	273
85°	62	61	60	55	53	73
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1585.6	1585.6	1585.6	1585.6	1585.6
2.5°	1594.8	1587.2	1570.4	1585.6	1582.7
5°	1585.6	1579.6	1562.8	1574.9	1572.1
7.5°	1574.9	1565.9	1549.1	1561.4	1558.3
10°	1558.3	1547.6	1529.3	1541.4	1536.9
12.5°	1535.3	1526.3	1508.0	1515.6	1512.5
15°	1509.4	1500.3	1480.4	1486.6	1479.0
17.5°	1477.4	1468.3	1448.4	1456.0	1448.4
20°	1442.3	1433.3	1411.9	1416.4	1410.4
22.5°	1407.3	1393.6	1373.7	1373.7	1370.6
25°	1366.1	1354.0	1328.0	1331.0	1328.0
27.5°	1320.3	1309.6	1289.9	1285.3	1277.8
30°	1274.7	1262.4	1239.6	1235.1	1228.9
32.5°	1225.8	1216.8	1192.3	1183.1	1177.0
35°	1178.6	1163.4	1139.0	1129.8	1122.2
37.5°	1125.2	1111.5	1087.0	1076.4	1068.8
40°	1070.4	1058.1	1033.7	1020.1	1013.9
42.5°	1017.0	1004.7	980.4	965.0	956.0
45°	959.1	948.4	925.4	908.8	902.6
47.5°	902.6	891.9	867.6	850.7	841.7
50°	843.1	835.5	814.2	792.8	785.2
52.5°	785.2	774.5	754.8	738.0	727.3
55°	725.8	716.6	698.3	680.0	672.5
57.5°	666.3	658.7	638.8	620.5	614.3
60°	606.8	600.8	579.5	562.6	558.1
62.5°	548.9	538.2	523.0	507.7	501.6
65°	489.5	480.3	465.0	451.3	443.7
67.5°	428.5	420.8	407.2	396.5	390.3
70°	372.0	365.9	352.2	341.5	335.5
72.5°	314.2	308.0	300.4	289.7	285.2
75°	256.1	253.1	245.4	236.4	239.4
77.5°	204.3	198.1	195.1	190.5	186.1
80°	152.6	150.9	147.8	143.4	140.3
82.5°	103.7	103.7	102.2	96.1	96.1
85°	62.4	61.0	59.5	54.8	53.4
87.5°	27.5	24.4	21.4	16.8	15.2
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	15.62	17.23	15.99	17.55	17.86	15.18	16.79	15.54	17.10	17.42
	3H	17.37	18.83	17.75	19.15	19.51	16.88	18.34	17.26	18.66	19.02
	4H	18.02	19.39	18.42	19.74	20.11	17.52	18.89	17.92	19.24	19.62
	6H	18.49	19.76	18.90	20.12	20.51	17.99	19.25	18.40	19.62	20.01
	8H	18.63	19.84	19.06	20.23	20.63	18.13	19.34	18.55	19.73	20.13
	12H	18.72	19.88	19.15	20.26	20.69	18.21	19.37	18.64	19.75	20.18
4H	2H	16.18	17.55	16.58	17.90	18.28	15.83	17.20	16.23	17.55	17.92
	3H	18.16	19.30	18.57	19.70	20.10	17.75	18.90	18.16	19.29	19.69
	4H	18.93	19.97	19.36	20.38	20.82	18.51	19.55	18.94	19.96	20.40
	6H	19.53	20.43	19.98	20.88	21.33	19.10	20.00	19.55	20.44	20.90
	8H	19.72	20.57	20.18	21.01	21.47	19.28	20.13	19.74	20.57	21.04
	12H	19.85	20.61	20.33	21.09	21.56	19.40	20.16	19.88	20.64	21.11
8H	4H	19.21	20.05	19.67	20.50	20.96	18.83	19.68	19.29	20.12	20.59
	6H	19.92	20.62	20.42	21.11	21.59	19.54	20.24	20.03	20.73	21.21
	8H	20.18	20.81	20.69	21.32	21.80	19.79	20.42	20.30	20.93	21.41
	12H	20.38	20.94	20.89	21.43	21.99	19.97	20.53	20.47	21.02	21.58
12H	4H	19.23	19.99	19.71	20.47	20.94	18.87	19.63	19.35	20.10	20.57
	6H	19.97	20.60	20.48	21.11	21.59	19.60	20.23	20.11	20.74	21.22
	8H	20.28	20.84	20.79	21.33	21.89	19.90	20.46	20.41	20.95	21.51