

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: P931027

Luminaire Tested: DFN2DS-SQ3F0-100DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931027
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-SQ3F0-100DS950-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

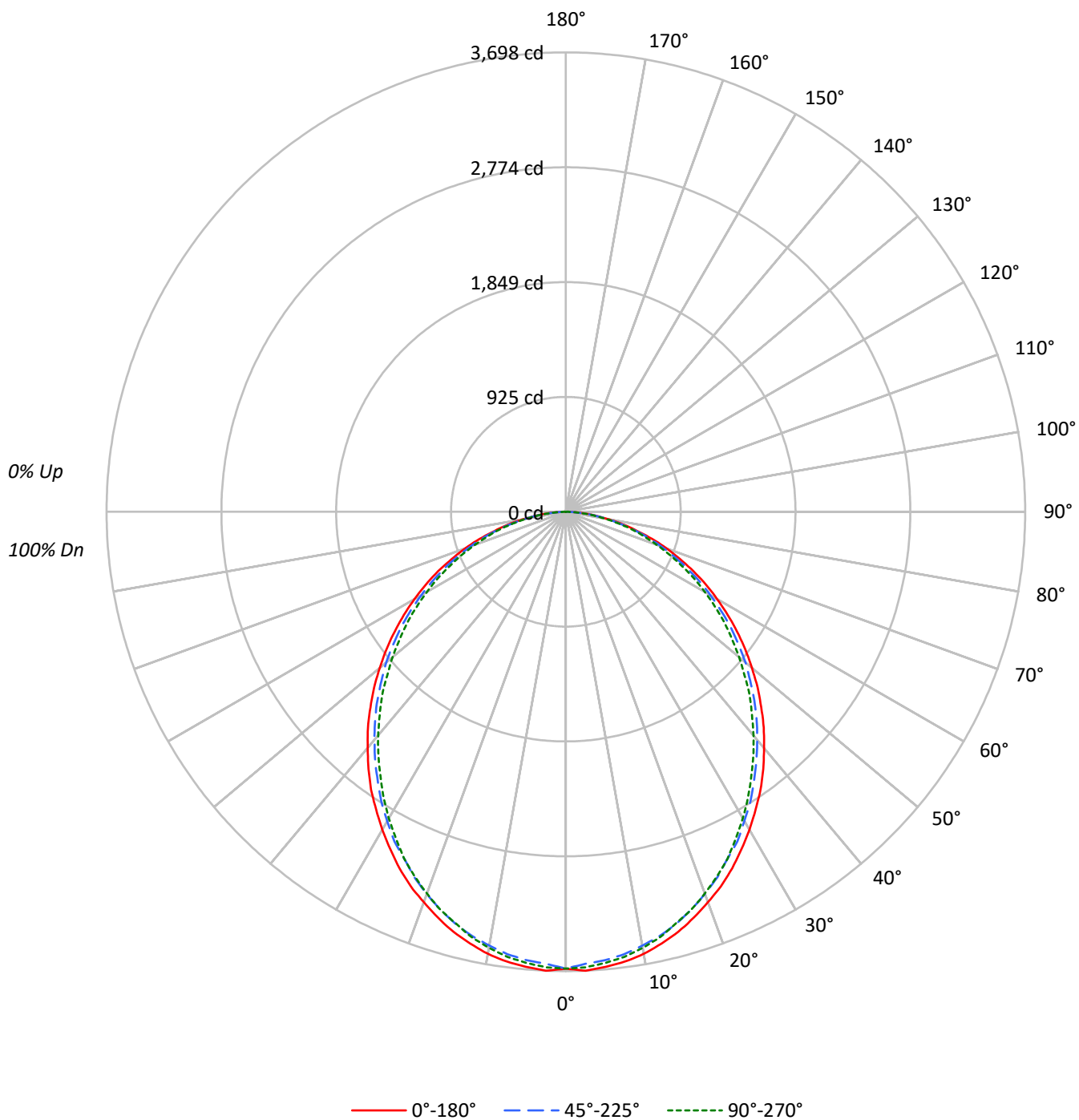
Lumens per Lamp: N/A
Luminaire Lumens: 9355.5 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
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

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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°	4213	4213	4213
5°	4229	4168	4193
10°	4204	4126	4147
15°	4152	4073	4069
20°	4078	3992	3988
25°	4005	3894	3894
30°	3911	3803	3770
35°	3823	3695	3640
40°	3713	3585	3517
45°	3604	3478	3392
50°	3485	3365	3246
55°	3362	3235	3115
60°	3225	3079	2966
65°	3077	2924	2790
70°	2890	2736	2606
75°	2629	2519	2458
80°	2334	2262	2146
85°	1904	1816	1628

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3604 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.1	3.7
10°-20°	973.8	10.4
20°-30°	1431.0	15.3
30°-40°	1662.0	17.8
40°-50°	1660.0	17.7
50°-60°	1447.4	15.5
60°-70°	1070.0	11.4
70°-80°	605.4	6.5
80°-90°	159.8	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°	2750.9	29.4
0°-40°	4412.9	47.2
0°-60°	7520.3	80.4
0°-90°	9355.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9355.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3677	3677	3677	3677	3677	
5°	3677	3663	3624	3652	3646	349
15°	3500	3479	3433	3448	3430	986
25°	3168	3140	3080	3087	3080	1458
35°	2733	2698	2641	2620	2602	1707
45°	2224	2199	2146	2107	2093	1717
55°	1683	1662	1619	1577	1559	1505
65°	1135	1114	1078	1047	1029	1122
75°	594	587	569	548	555	634
85°	145	142	138	127	124	170
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3677.1	3677.1	3677.1	3677.1	3677.1
2.5°	3698.4	3680.8	3641.7	3677.1	3670.3
5°	3677.1	3663.2	3624.2	3652.3	3645.5
7.5°	3652.3	3631.3	3592.2	3620.8	3613.7
10°	3613.7	3588.9	3546.5	3574.7	3564.2
12.5°	3560.4	3539.4	3497.0	3514.6	3507.5
15°	3500.4	3479.4	3433.2	3447.5	3429.9
17.5°	3426.1	3405.1	3358.9	3376.6	3358.9
20°	3344.6	3323.7	3274.1	3284.6	3270.7
22.5°	3263.7	3231.8	3185.6	3185.6	3178.5
25°	3168.0	3139.9	3079.8	3086.6	3079.8
27.5°	3061.8	3037.0	2991.3	2980.8	2963.1
30°	2956.1	2927.5	2874.6	2864.1	2849.8
32.5°	2842.7	2821.8	2765.1	2743.7	2729.4
35°	2733.2	2698.0	2641.3	2619.9	2602.2
37.5°	2609.4	2577.5	2520.9	2496.1	2478.5
40°	2482.2	2453.7	2397.1	2365.6	2351.3
42.5°	2358.4	2329.9	2273.7	2238.0	2217.1
45°	2224.2	2199.4	2146.1	2107.4	2093.3
47.5°	2093.3	2068.5	2011.8	1972.8	1951.8
50°	1955.2	1937.5	1888.0	1838.5	1820.9
52.5°	1820.9	1796.2	1750.3	1711.4	1686.6
55°	1683.2	1661.9	1619.4	1577.0	1559.4
57.5°	1545.2	1527.5	1481.4	1439.0	1424.8
60°	1407.1	1393.2	1343.7	1304.7	1294.2
62.5°	1272.8	1248.1	1212.8	1177.6	1163.3
65°	1135.1	1113.8	1078.5	1046.6	1029.0
67.5°	993.8	975.7	944.2	919.5	905.2
70°	862.8	848.5	816.7	791.9	778.0
72.5°	728.5	714.2	696.7	671.9	661.3
75°	593.8	587.1	569.1	548.1	555.2
77.5°	473.8	459.6	452.4	441.9	431.4
80°	353.7	350.0	342.8	332.4	325.3
82.5°	240.5	240.5	237.1	222.8	222.8
85°	144.8	141.5	138.1	127.2	123.8
87.5°	63.8	56.6	49.5	39.0	35.2
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	16.28	17.89	16.64	18.20	18.52	15.84	17.45	16.20	17.76	18.07
	3H	18.03	19.48	18.41	19.81	20.17	17.54	18.99	17.92	19.32	19.68
	4H	18.68	20.04	19.07	20.39	20.77	18.18	19.55	18.58	19.90	20.27
	6H	19.14	20.41	19.56	20.78	21.17	18.64	19.91	19.05	20.28	20.67
	8H	19.29	20.50	19.71	20.89	21.29	18.79	20.00	19.21	20.38	20.78
	12H	19.38	20.54	19.81	20.92	21.35	18.87	20.03	19.30	20.41	20.84
4H	2H	16.84	18.21	17.24	18.56	18.93	16.49	17.86	16.89	18.20	18.58
	3H	18.82	19.96	19.22	20.36	20.76	18.41	19.55	18.82	19.95	20.35
	4H	19.59	20.63	20.02	21.04	21.48	19.17	20.20	19.60	20.62	21.05
	6H	20.19	21.09	20.64	21.53	21.99	19.76	20.66	20.21	21.10	21.56
	8H	20.38	21.22	20.84	21.67	22.13	19.94	20.79	20.40	21.23	21.69
	12H	20.51	21.27	20.99	21.75	22.21	20.06	20.82	20.54	21.29	21.76
8H	4H	19.86	20.71	20.33	21.15	21.62	19.49	20.34	19.95	20.78	21.25
	6H	20.58	21.28	21.07	21.77	22.25	20.20	20.90	20.69	21.39	21.86
	8H	20.84	21.47	21.35	21.98	22.46	20.45	21.08	20.96	21.58	22.07
	12H	21.04	21.60	21.55	22.09	22.65	20.63	21.18	21.13	21.67	22.23
12H	4H	19.89	20.65	20.37	21.13	21.60	19.53	20.29	20.01	20.76	21.23
	6H	20.62	21.26	21.13	21.76	22.25	20.26	20.89	20.77	21.39	21.88
	8H	20.94	21.50	21.45	21.99	22.55	20.56	21.12	21.07	21.61	22.17