

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: P931011

Luminaire Tested: DFN2DS-SQ3F0-100DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931011
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-SQ3F0-100DS830-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

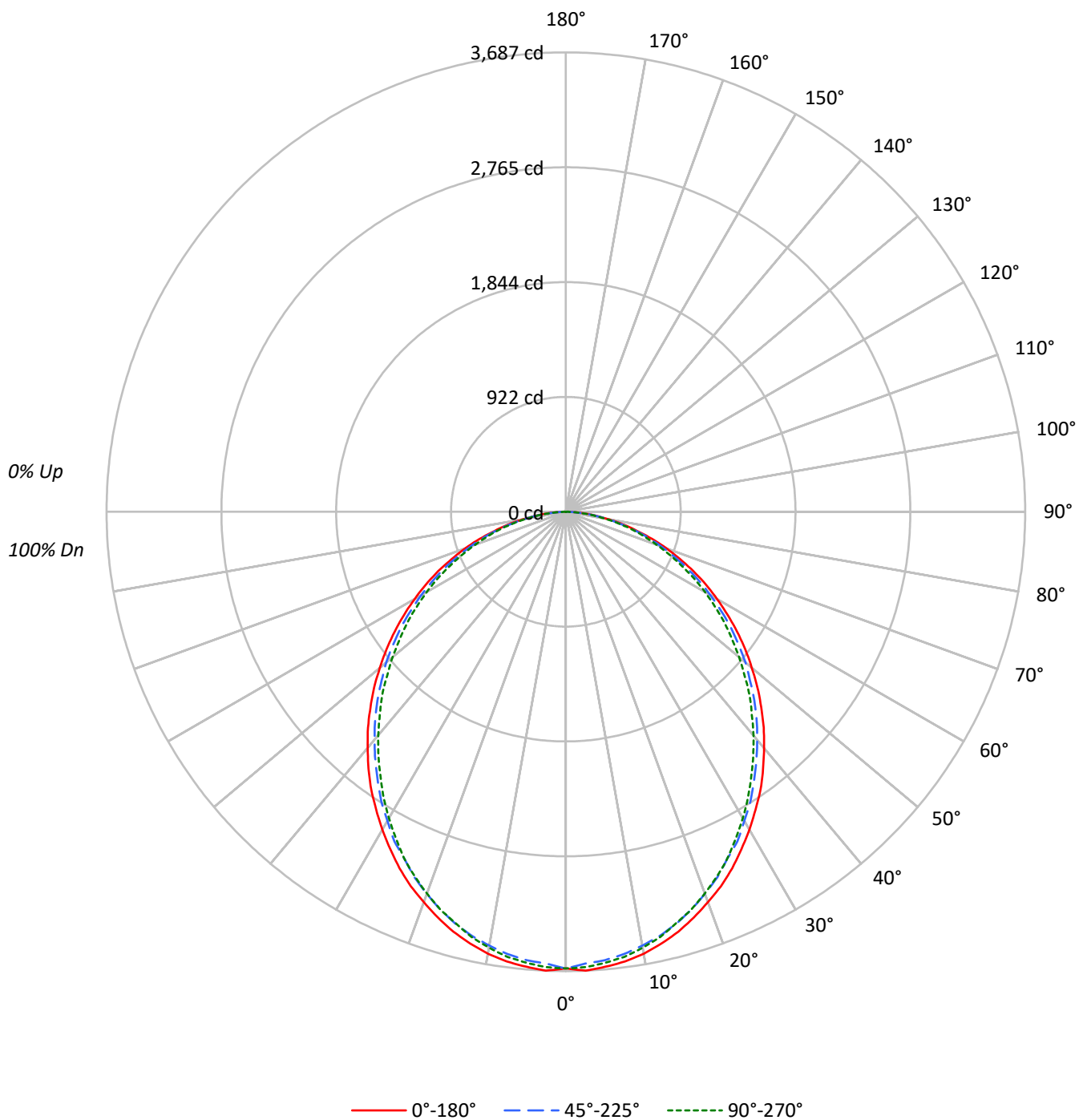
Lumens per Lamp: N/A
Luminaire Lumens: 9325.8 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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°	4200	4200	4200
5°	4216	4155	4180
10°	4191	4113	4134
15°	4139	4060	4056
20°	4065	3980	3976
25°	3993	3881	3881
30°	3899	3791	3759
35°	3811	3683	3628
40°	3701	3574	3506
45°	3593	3467	3381
50°	3474	3355	3236
55°	3352	3225	3105
60°	3214	3069	2956
65°	3068	2915	2781
70°	2881	2727	2598
75°	2621	2511	2450
80°	2327	2255	2139
85°	1897	1809	1622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3593 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.0	3.7
10°-20°	970.7	10.4
20°-30°	1426.5	15.3
30°-40°	1656.8	17.8
40°-50°	1654.7	17.7
50°-60°	1442.9	15.5
60°-70°	1066.6	11.4
70°-80°	603.5	6.5
80°-90°	159.3	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°	2742.1	29.4
0°-40°	4398.9	47.2
0°-60°	7496.5	80.4
0°-90°	9325.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9325.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3665	3665	3665	3665	3665	
5°	3665	3652	3613	3641	3634	348
15°	3489	3468	3422	3436	3419	983
25°	3158	3130	3070	3077	3070	1453
35°	2724	2689	2633	2612	2594	1701
45°	2217	2192	2139	2101	2087	1711
55°	1678	1657	1614	1572	1554	1500
65°	1132	1110	1075	1043	1026	1119
75°	592	585	567	546	553	632
85°	144	141	138	127	123	170
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3665.4	3665.4	3665.4	3665.4	3665.4
2.5°	3686.7	3669.1	3630.2	3665.4	3658.6
5°	3665.4	3651.6	3612.7	3640.7	3634.0
7.5°	3640.7	3619.7	3580.8	3609.3	3602.2
10°	3602.2	3577.5	3535.2	3563.3	3552.8
12.5°	3549.1	3528.2	3485.9	3503.5	3496.3
15°	3489.3	3468.3	3422.3	3436.5	3419.0
17.5°	3415.2	3394.3	3348.2	3365.9	3348.2
20°	3334.0	3313.1	3263.7	3274.2	3260.4
22.5°	3253.3	3221.5	3175.5	3175.5	3168.4
25°	3158.0	3129.9	3070.1	3076.8	3070.1
27.5°	3052.1	3027.4	2981.8	2971.4	2953.7
30°	2946.7	2918.2	2865.5	2855.0	2840.8
32.5°	2833.7	2812.8	2756.3	2735.0	2720.8
35°	2724.5	2689.4	2632.9	2611.6	2594.0
37.5°	2601.1	2569.3	2512.9	2488.2	2470.6
40°	2474.4	2445.9	2389.5	2358.1	2343.9
42.5°	2350.9	2322.5	2266.5	2230.9	2210.0
45°	2217.1	2192.4	2139.3	2100.8	2086.6
47.5°	2086.6	2061.9	2005.4	1966.5	1945.6
50°	1949.0	1931.4	1882.0	1832.7	1815.1
52.5°	1815.1	1790.5	1744.8	1706.0	1681.3
55°	1677.9	1656.6	1614.3	1572.0	1554.5
57.5°	1540.3	1522.6	1476.7	1434.5	1420.3
60°	1402.6	1388.8	1339.4	1300.5	1290.1
62.5°	1268.8	1244.1	1209.0	1173.8	1159.6
65°	1131.5	1110.2	1075.1	1043.3	1025.7
67.5°	990.6	972.6	941.2	916.6	902.3
70°	860.0	845.8	814.1	789.4	775.5
72.5°	726.2	712.0	694.4	669.8	659.2
75°	592.0	585.3	567.3	546.4	553.4
77.5°	472.3	458.1	450.9	440.5	430.0
80°	352.6	348.9	341.8	331.3	324.2
82.5°	239.7	239.7	236.3	222.1	222.1
85°	144.3	141.0	137.6	126.8	123.4
87.5°	63.6	56.4	49.4	38.9	35.1
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	16.27	17.88	16.63	18.19	18.51	15.82	17.43	16.19	17.75	18.06
	3H	18.02	19.47	18.40	19.80	20.16	17.53	18.98	17.90	19.31	19.67
	4H	18.66	20.03	19.06	20.38	20.76	18.17	19.54	18.57	19.89	20.26
	6H	19.13	20.40	19.54	20.77	21.16	18.63	19.90	19.04	20.27	20.66
	8H	19.28	20.49	19.70	20.88	21.28	18.77	19.98	19.20	20.37	20.77
	12H	19.37	20.53	19.80	20.91	21.34	18.86	20.02	19.28	20.40	20.83
4H	2H	16.83	18.20	17.23	18.55	18.92	16.48	17.85	16.87	18.19	18.57
	3H	18.80	19.95	19.21	20.35	20.75	18.40	19.54	18.81	19.94	20.34
	4H	19.58	20.62	20.01	21.03	21.47	19.16	20.19	19.59	20.61	21.04
	6H	20.18	21.08	20.63	21.52	21.98	19.74	20.65	20.20	21.09	21.55
	8H	20.37	21.21	20.83	21.66	22.12	19.93	20.77	20.39	21.22	21.68
	12H	20.50	21.26	20.98	21.73	22.20	20.05	20.81	20.53	21.28	21.75
8H	4H	19.85	20.70	20.31	21.14	21.61	19.48	20.33	19.94	20.77	21.23
	6H	20.57	21.27	21.06	21.76	22.23	20.19	20.89	20.68	21.38	21.85
	8H	20.83	21.46	21.34	21.96	22.45	20.44	21.07	20.95	21.57	22.06
	12H	21.03	21.58	21.53	22.08	22.64	20.61	21.17	21.12	21.66	22.22
12H	4H	19.88	20.64	20.36	21.12	21.58	19.52	20.28	20.00	20.75	21.22
	6H	20.61	21.25	21.12	21.75	22.24	20.24	20.88	20.75	21.38	21.87
	8H	20.93	21.49	21.43	21.98	22.54	20.55	21.11	21.06	21.60	22.16