

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: P931137

Luminaire Tested: DFN2DS-SQ4F0-100DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931137
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-SQ4F0-100DS830-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

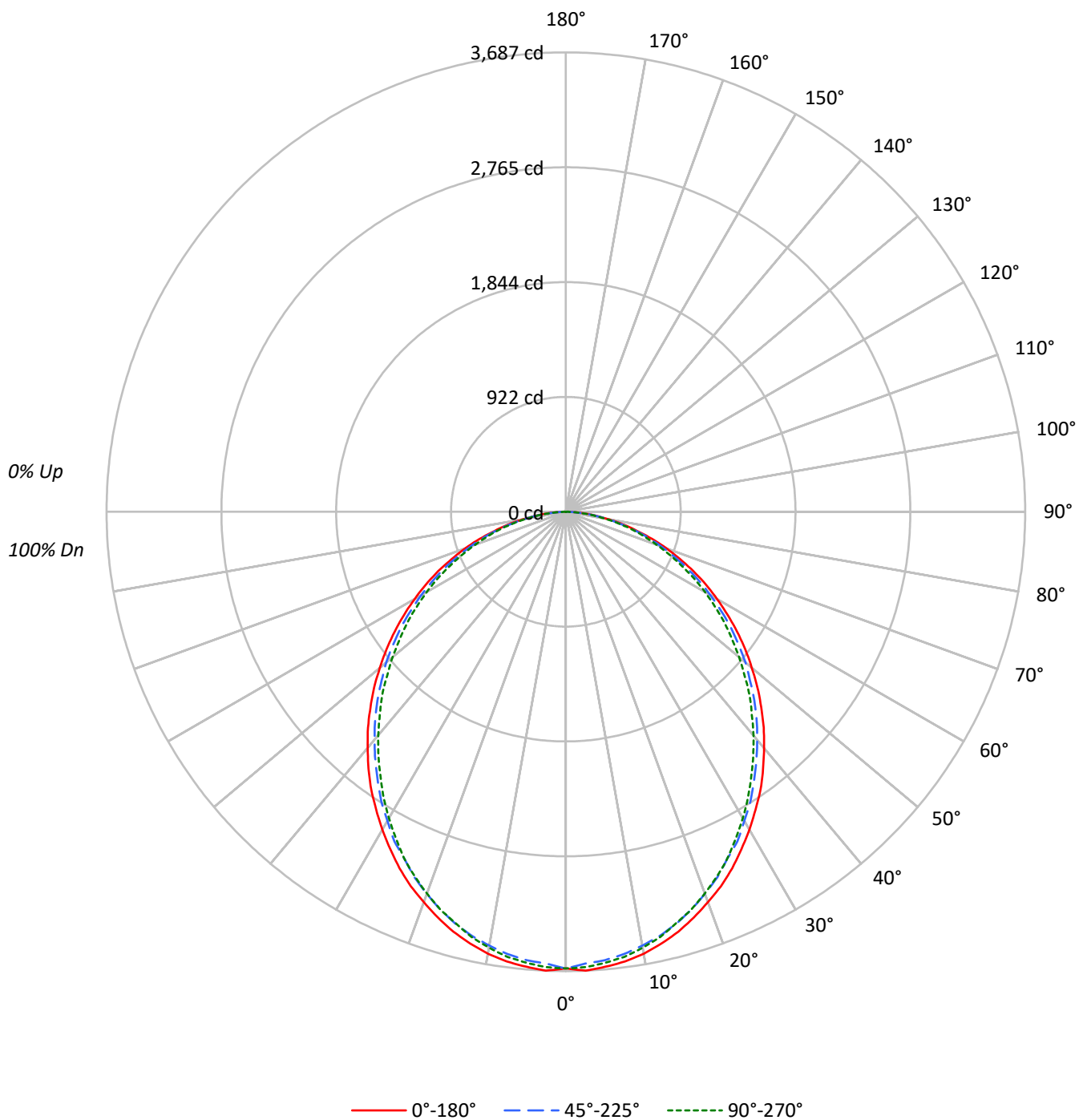
Lumens per Lamp: N/A
Luminaire Lumens: 9325.8 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 100.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
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°	2572	2572	2572
5°	2582	2545	2560
10°	2567	2519	2531
15°	2535	2486	2484
20°	2490	2437	2435
25°	2445	2377	2377
30°	2387	2322	2302
35°	2334	2255	2222
40°	2266	2189	2147
45°	2200	2123	2071
50°	2128	2054	1981
55°	2053	1975	1902
60°	1968	1880	1810
65°	1879	1785	1703
70°	1764	1670	1591
75°	1605	1538	1500
80°	1425	1381	1310
85°	1162	1108	993

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2200 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	14.56	16.18	14.93	16.49	16.80	14.12	15.73	14.49	16.05	16.36
	3H	16.31	17.77	16.69	18.10	18.46	15.82	17.28	16.20	17.60	17.97
	4H	16.96	18.33	17.36	18.68	19.05	16.47	17.84	16.86	18.18	18.56
	6H	17.43	18.70	17.84	19.06	19.45	16.93	18.20	17.34	18.56	18.95
	8H	17.57	18.78	18.00	19.17	19.57	17.07	18.28	17.49	18.67	19.07
	12H	17.66	18.82	18.09	19.21	19.63	17.15	18.31	17.58	18.69	19.12
4H	2H	15.12	16.49	15.52	16.84	17.22	14.77	16.14	15.17	16.49	16.87
	3H	17.10	18.25	17.51	18.64	19.04	16.69	17.84	17.10	18.24	18.64
	4H	17.88	18.91	18.31	19.33	19.76	17.45	18.49	17.88	18.90	19.34
	6H	18.47	19.38	18.93	19.82	20.27	18.04	18.95	18.50	19.39	19.84
	8H	18.66	19.51	19.12	19.95	20.42	18.22	19.07	18.69	19.51	19.98
	12H	18.79	19.55	19.27	20.03	20.50	18.34	19.10	18.82	19.58	20.05
8H	4H	18.15	19.00	18.61	19.44	19.90	17.78	18.62	18.24	19.06	19.53
	6H	18.86	19.57	19.36	20.06	20.53	18.48	19.19	18.98	19.67	20.15
	8H	19.12	19.75	19.63	20.26	20.75	18.73	19.36	19.24	19.87	20.36
	12H	19.32	19.88	19.83	20.37	20.93	18.91	19.47	19.42	19.96	20.52
12H	4H	18.18	18.94	18.66	19.41	19.88	17.81	18.57	18.29	19.05	19.52
	6H	18.91	19.54	19.42	20.05	20.53	18.54	19.17	19.05	19.68	20.17
	8H	19.22	19.78	19.73	20.27	20.83	18.85	19.40	19.35	19.89	20.46