

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: P931145

Luminaire Tested: DFN2DS-SQ4F0-100DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931145
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-SQ4F0-100DS927-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

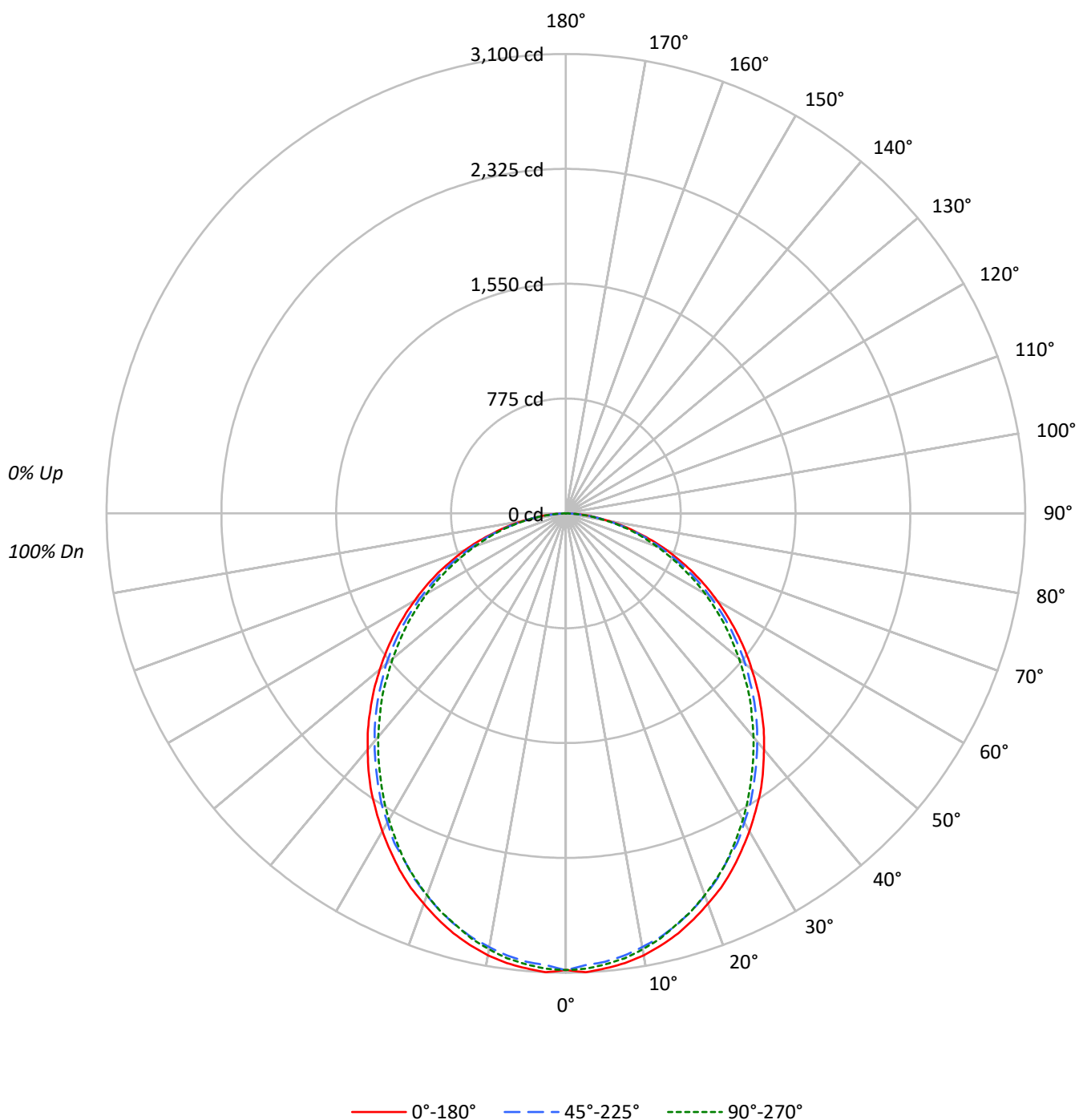
Lumens per Lamp: N/A
Luminaire Lumens: 7840.8 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

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°	2162	2162	2162
5°	2171	2139	2152
10°	2158	2118	2128
15°	2131	2090	2088
20°	2093	2049	2047
25°	2056	1998	1998
30°	2007	1952	1935
35°	1962	1896	1868
40°	1906	1840	1805
45°	1850	1785	1741
50°	1789	1727	1666
55°	1726	1660	1599
60°	1655	1580	1522
65°	1580	1501	1432
70°	1483	1404	1338
75°	1349	1293	1261
80°	1198	1161	1102
85°	977	931	836

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1850 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.1	3.7
10°-20°	816.1	10.4
20°-30°	1199.3	15.3
30°-40°	1392.9	17.8
40°-50°	1391.2	17.7
50°-60°	1213.1	15.5
60°-70°	896.8	11.4
70°-80°	507.4	6.5
80°-90°	133.9	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°	2305.5	29.4
0°-40°	3698.4	47.2
0°-60°	6302.7	80.4
0°-90°	7840.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7840.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3082	3082	3082	3082	3082	
5°	3082	3070	3037	3061	3055	293
15°	2934	2916	2877	2889	2875	826
25°	2655	2632	2581	2587	2581	1222
35°	2291	2261	2214	2196	2181	1430
45°	1864	1843	1799	1766	1754	1439
55°	1411	1393	1357	1322	1307	1261
65°	951	934	904	877	862	941
75°	498	492	477	459	465	531
85°	121	119	116	107	104	143
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3081.8	3081.8	3081.8	3081.8	3081.8
2.5°	3099.7	3084.8	3052.1	3081.8	3076.0
5°	3081.8	3070.1	3037.4	3061.0	3055.3
7.5°	3061.0	3043.3	3010.6	3034.5	3028.6
10°	3028.6	3007.9	2972.3	2995.9	2987.1
12.5°	2983.9	2966.4	2930.8	2945.6	2939.6
15°	2933.6	2916.1	2877.3	2889.3	2874.6
17.5°	2871.4	2853.8	2815.1	2829.9	2815.1
20°	2803.1	2785.5	2744.0	2752.8	2741.2
22.5°	2735.3	2708.6	2669.8	2669.8	2663.9
25°	2655.1	2631.5	2581.2	2586.8	2581.2
27.5°	2566.1	2545.3	2507.0	2498.2	2483.4
30°	2477.5	2453.5	2409.2	2400.4	2388.4
32.5°	2382.5	2364.9	2317.4	2299.5	2287.5
35°	2290.7	2261.2	2213.6	2195.7	2180.9
37.5°	2186.9	2160.2	2112.7	2092.0	2077.2
40°	2080.3	2056.4	2009.0	1982.6	1970.7
42.5°	1976.6	1952.7	1905.6	1875.7	1858.1
45°	1864.1	1843.3	1798.6	1766.2	1754.4
47.5°	1754.4	1733.6	1686.1	1653.4	1635.8
50°	1638.6	1623.8	1582.3	1540.8	1526.1
52.5°	1526.1	1505.4	1466.9	1434.3	1413.6
55°	1410.7	1392.8	1357.3	1321.7	1307.0
57.5°	1295.0	1280.2	1241.5	1206.1	1194.1
60°	1179.3	1167.6	1126.1	1093.4	1084.6
62.5°	1066.7	1046.0	1016.5	986.9	975.0
65°	951.4	933.5	903.9	877.1	862.4
67.5°	832.9	817.7	791.4	770.6	758.7
70°	723.1	711.1	684.4	663.7	652.1
72.5°	610.6	598.6	583.9	563.1	554.2
75°	497.7	492.1	476.9	459.4	465.3
77.5°	397.1	385.1	379.1	370.3	361.5
80°	296.4	293.4	287.3	278.5	272.6
82.5°	201.6	201.6	198.7	186.8	186.8
85°	121.3	118.6	115.7	106.6	103.8
87.5°	53.5	47.4	41.5	32.7	29.5
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	13.96	15.57	14.33	15.89	16.20	13.52	15.13	13.88	15.44	15.76
	3H	15.71	17.17	16.09	17.49	17.85	15.22	16.68	15.60	17.00	17.36
	4H	16.36	17.73	16.76	18.08	18.45	15.86	17.23	16.26	17.58	17.96
	6H	16.83	18.10	17.24	18.46	18.85	16.33	17.59	16.74	17.96	18.35
	8H	16.97	18.18	17.40	18.57	18.97	16.47	17.68	16.89	18.07	18.47
	12H	17.06	18.22	17.49	18.60	19.03	16.55	17.71	16.98	18.09	18.52
4H	2H	14.52	15.89	14.92	16.24	16.62	14.17	15.54	14.57	15.89	16.26
	3H	16.50	17.64	16.91	18.04	18.44	16.09	17.24	16.50	17.63	18.04
	4H	17.27	18.31	17.71	18.72	19.16	16.85	17.89	17.28	18.30	18.74
	6H	17.87	18.78	18.32	19.22	19.67	17.44	18.34	17.89	18.78	19.24
	8H	18.06	18.91	18.52	19.35	19.81	17.62	18.47	18.08	18.91	19.38
	12H	18.19	18.95	18.67	19.43	19.90	17.74	18.50	18.22	18.98	19.45
8H	4H	17.55	18.39	18.01	18.84	19.30	17.17	18.02	17.63	18.46	18.93
	6H	18.26	18.96	18.76	19.45	19.93	17.88	18.58	18.37	19.07	19.55
	8H	18.52	19.15	19.03	19.66	20.14	18.13	18.76	18.64	19.27	19.75
	12H	18.72	19.28	19.23	19.77	20.33	18.31	18.87	18.81	19.36	19.92
12H	4H	17.57	18.33	18.05	18.81	19.28	17.21	17.97	17.69	18.44	18.91
	6H	18.31	18.94	18.82	19.45	19.93	17.94	18.57	18.45	19.08	19.56
	8H	18.62	19.18	19.13	19.67	20.23	18.24	18.80	18.75	19.29	19.85