

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: P930860

Luminaire Tested: DFN2DS-SQ2F0-060DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ2F0-060DS930-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

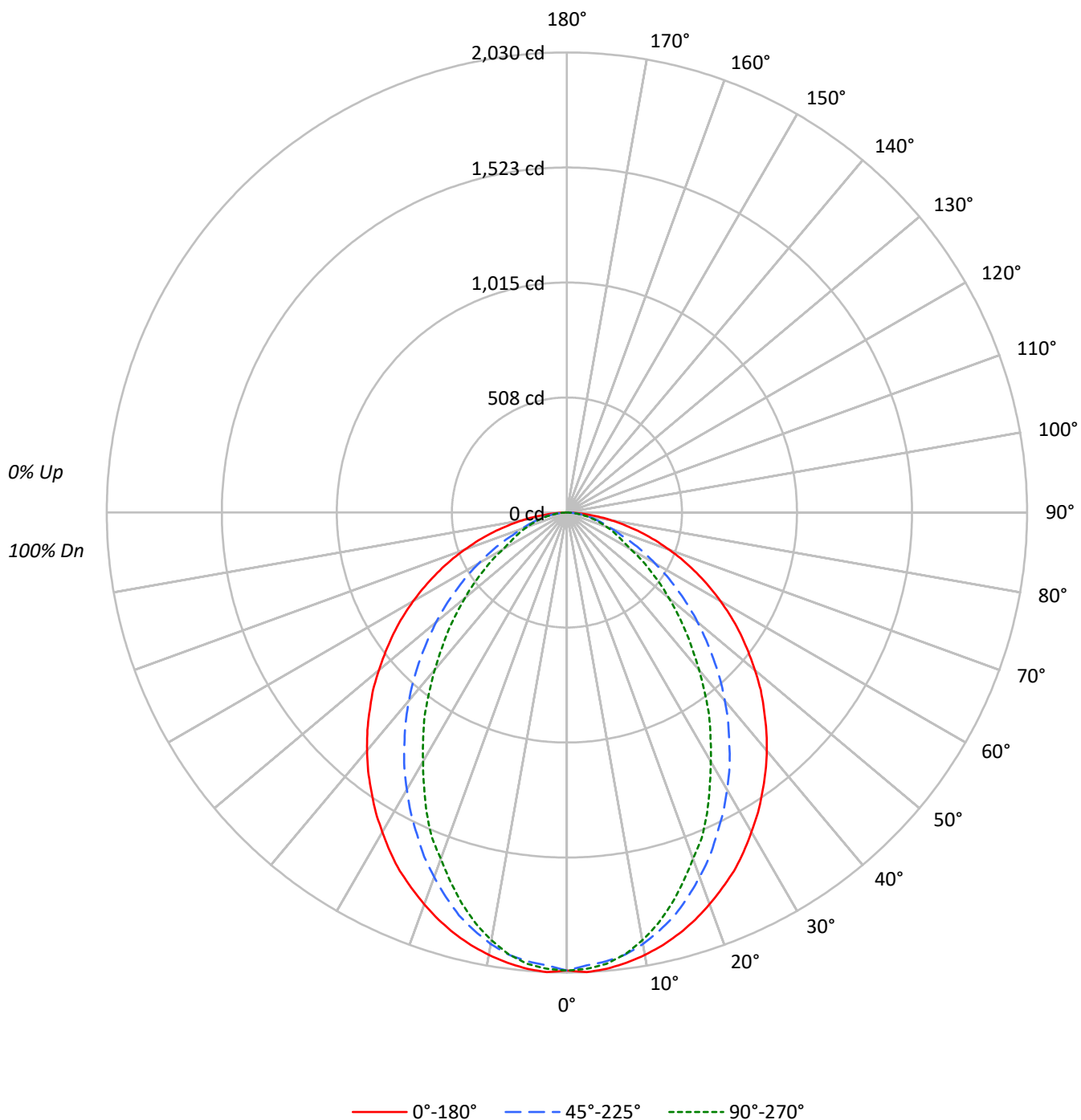
Lumens per Lamp: N/A
Luminaire Lumens: 4156.5 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 58.7
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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4444	4444	4444
5°	4461	4388	4413
10°	4427	4317	4280
15°	4376	4188	4068
20°	4305	4006	3805
25°	4233	3798	3550
30°	4133	3585	3223
35°	4036	3354	2936
40°	3937	3113	2604
45°	3822	2844	2303
50°	3704	2572	2009
55°	3583	2279	1725
60°	3443	1971	1432
65°	3284	1656	1303
70°	3092	1364	1199
75°	2859	1243	1120
80°	2524	1111	1019
85°	1983	875	875

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3822 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.4	4.6
10°-20°	520.0	12.5
20°-30°	730.0	17.6
30°-40°	795.8	19.1
40°-50°	731.4	17.6
50°-60°	574.4	13.8
60°-70°	373.9	9.0
70°-80°	192.5	4.6
80°-90°	49.1	1.2
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°	1439.4	34.6
0°-40°	2235.2	53.8
0°-60°	3541.0	85.2
0°-90°	4156.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4156.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2021	2021	2021	2021	2021	
5°	2021	2012	1988	2005	1999	192
15°	1922	1902	1840	1805	1787	542
25°	1745	1686	1566	1491	1463	802
35°	1504	1410	1249	1134	1094	941
45°	1229	1106	915	784	741	949
55°	935	792	594	485	450	835
65°	631	483	318	256	250	626
75°	336	208	146	134	132	356
85°	79	40	35	35	35	94
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2021.0	2021.0	2021.0	2021.0	2021.0
2.5°	2030.2	2021.0	2000.8	2019.2	2015.6
5°	2021.0	2011.9	1988.0	2004.6	1999.1
7.5°	2004.6	1993.7	1968.1	1975.2	1966.1
10°	1982.6	1969.8	1933.3	1927.7	1916.8
12.5°	1955.3	1938.7	1889.3	1878.4	1858.2
15°	1922.3	1902.0	1839.9	1805.2	1787.0
17.5°	1883.9	1854.5	1777.7	1737.5	1708.2
20°	1839.9	1803.3	1711.9	1666.3	1625.9
22.5°	1792.4	1750.3	1644.2	1582.1	1554.7
25°	1744.9	1686.3	1565.6	1490.7	1463.2
27.5°	1688.3	1625.9	1492.4	1406.4	1364.4
30°	1627.9	1558.2	1411.9	1318.8	1269.3
32.5°	1569.3	1485.1	1335.3	1225.4	1179.6
35°	1503.5	1410.2	1249.3	1134.0	1093.6
37.5°	1439.5	1338.7	1168.8	1042.5	996.8
40°	1371.7	1262.1	1084.5	954.7	907.2
42.5°	1302.3	1185.3	1000.5	865.0	819.5
45°	1229.1	1106.4	914.6	784.5	740.7
47.5°	1159.7	1029.8	832.3	702.3	662.1
50°	1082.8	953.0	751.8	625.4	587.2
52.5°	1007.7	870.5	674.9	554.2	519.5
55°	934.6	791.9	594.4	484.8	450.0
57.5°	859.7	713.3	523.1	420.7	391.4
60°	782.8	636.5	448.1	354.9	325.6
62.5°	707.9	561.6	384.0	296.3	281.7
65°	631.1	482.8	318.3	256.2	250.5
67.5°	557.9	409.6	256.2	224.9	219.5
70°	481.0	338.4	212.1	193.9	186.5
72.5°	407.9	272.5	177.3	162.8	159.1
75°	336.5	208.4	146.3	133.5	131.8
77.5°	265.3	148.1	115.2	107.9	104.2
80°	199.3	106.1	87.7	80.5	80.5
82.5°	139.0	71.4	60.3	56.6	56.6
85°	78.6	40.2	34.7	34.7	34.7
87.5°	29.3	14.6	14.6	12.8	12.8
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	16.42	17.94	16.78	18.25	18.57	12.38	13.90	12.74	14.21	14.53
	3H	18.18	19.55	18.56	19.87	20.24	13.64	15.01	14.02	15.34	15.70
	4H	18.85	20.13	19.25	20.48	20.86	14.14	15.43	14.54	15.77	16.15
	6H	19.34	20.52	19.75	20.89	21.28	14.53	15.71	14.94	16.07	16.47
	8H	19.50	20.63	19.93	21.02	21.42	14.65	15.78	15.08	16.17	16.57
	12H	19.61	20.68	20.04	21.07	21.50	14.73	15.81	15.16	16.19	16.62
4H	2H	16.52	17.80	16.92	18.15	18.53	13.07	14.35	13.47	14.70	15.08
	3H	18.45	19.52	18.86	19.92	20.32	14.52	15.58	14.93	15.98	16.38
	4H	19.20	20.16	19.64	20.58	21.01	15.12	16.07	15.55	16.49	16.93
	6H	19.80	20.63	20.25	21.07	21.53	15.60	16.44	16.06	16.88	17.34
	8H	20.01	20.79	20.47	21.23	21.70	15.77	16.54	16.23	16.99	17.45
	12H	20.16	20.86	20.65	21.34	21.81	15.88	16.58	16.36	17.06	17.53
8H	4H	19.23	20.01	19.69	20.45	20.92	15.47	16.25	15.93	16.69	17.16
	6H	19.87	20.51	20.36	21.00	21.48	16.06	16.70	16.55	17.19	17.67
	8H	20.12	20.69	20.63	21.20	21.69	16.28	16.85	16.79	17.36	17.85
	12H	20.32	20.83	20.83	21.32	21.89	16.46	16.97	16.96	17.46	18.02
12H	4H	19.21	19.91	19.69	20.39	20.86	15.51	16.21	15.99	16.69	17.16
	6H	19.85	20.42	20.36	20.93	21.42	16.12	16.70	16.63	17.21	17.69
	8H	20.13	20.64	20.64	21.13	21.70	16.39	16.90	16.90	17.39	17.96

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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