

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: P930500

Luminaire Tested: DFN2DS-PN2F0-060DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930500
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-PN2F0-060DS930-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

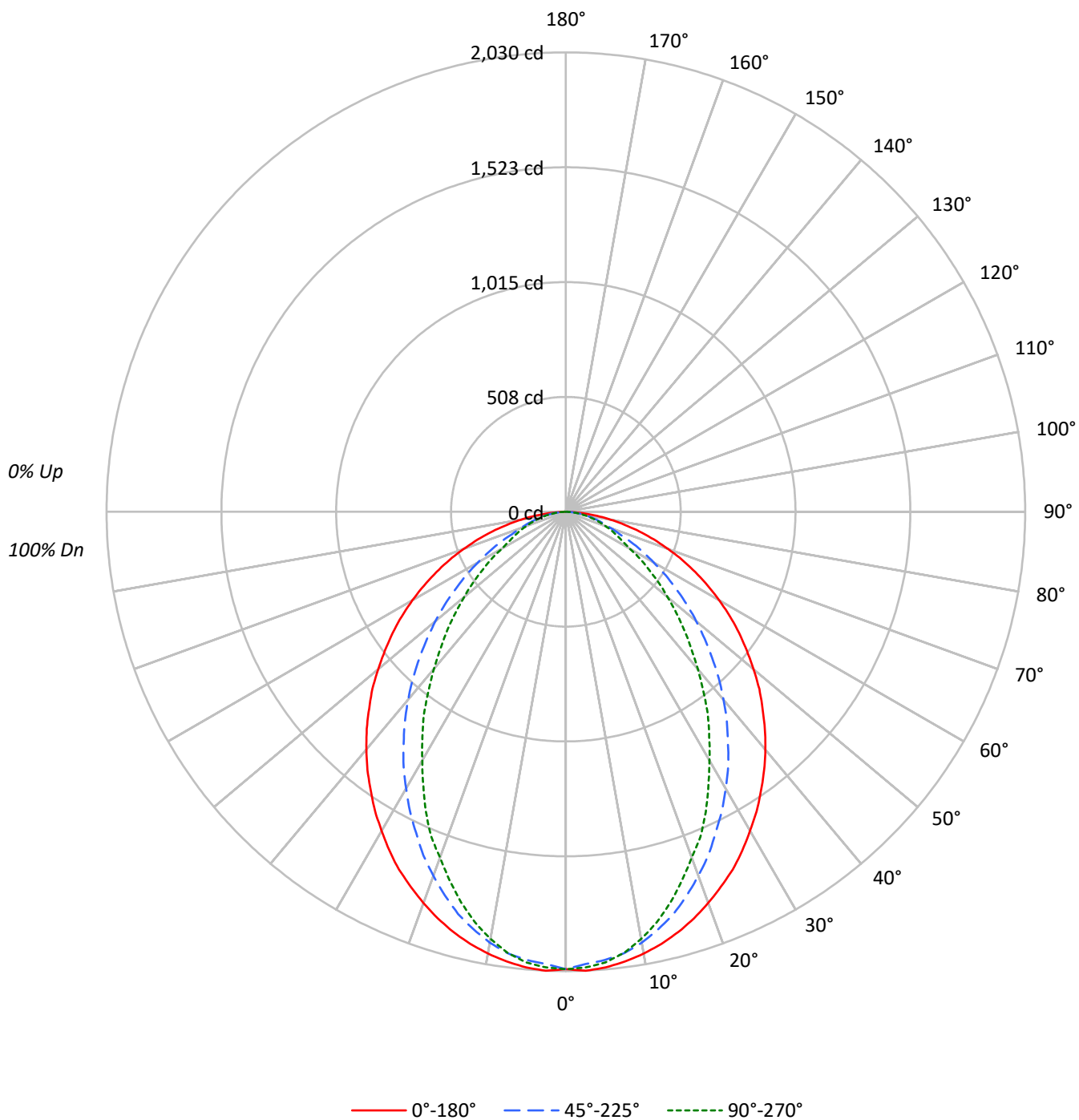
Lumens per Lamp: N/A
Luminaire Lumens: 4156.5 lumens
Efficiency: N/A
Efficacy: 61.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 67.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
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°	4377	4377	4377
5°	4394	4322	4346
10°	4360	4252	4216
15°	4310	4126	4007
20°	4241	3946	3747
25°	4170	3741	3497
30°	4071	3531	3174
35°	3975	3303	2892
40°	3878	3066	2565
45°	3765	2801	2269
50°	3648	2533	1979
55°	3529	2245	1699
60°	3391	1941	1410
65°	3234	1631	1284
70°	3046	1343	1181
75°	2816	1224	1103
80°	2486	1094	1004
85°	1953	862	862

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3765 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	16.36	17.89	16.73	18.20	18.51	12.32	13.85	12.69	14.16	14.47
	3H	18.13	19.49	18.51	19.82	20.18	13.59	14.96	13.97	15.28	15.65
	4H	18.80	20.08	19.20	20.43	20.80	14.09	15.37	14.49	15.72	16.10
	6H	19.28	20.47	19.70	20.83	21.23	14.47	15.66	14.88	16.02	16.41
	8H	19.45	20.58	19.88	20.97	21.37	14.60	15.72	15.02	16.11	16.51
	12H	19.55	20.63	19.98	21.01	21.44	14.68	15.76	15.11	16.14	16.57
4H	2H	16.47	17.75	16.87	18.10	18.48	13.02	14.30	13.42	14.65	15.03
	3H	18.40	19.46	18.81	19.86	20.27	14.46	15.53	14.87	15.93	16.33
	4H	19.15	20.11	19.58	20.52	20.96	15.06	16.02	15.50	16.44	16.87
	6H	19.74	20.57	20.20	21.02	21.48	15.55	16.38	16.01	16.83	17.29
	8H	19.96	20.73	20.42	21.18	21.65	15.71	16.49	16.18	16.93	17.40
	12H	20.11	20.81	20.59	21.28	21.75	15.83	16.52	16.31	17.00	17.47
8H	4H	19.17	19.95	19.64	20.40	20.86	15.42	16.19	15.88	16.64	17.11
	6H	19.81	20.46	20.31	20.95	21.42	16.00	16.65	16.50	17.14	17.61
	8H	20.06	20.64	20.58	21.15	21.64	16.22	16.80	16.74	17.31	17.80
	12H	20.27	20.78	20.78	21.27	21.83	16.40	16.91	16.91	17.40	17.97
12H	4H	19.16	19.85	19.64	20.33	20.80	15.46	16.15	15.94	16.63	17.10
	6H	19.79	20.37	20.31	20.88	21.37	16.07	16.64	16.58	17.15	17.64
	8H	20.08	20.59	20.59	21.08	21.64	16.34	16.85	16.85	17.34	17.91