

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: P929818

Luminaire Tested: DFN2DS-4P2F0-030DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929818
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-4P2F0-030DS935-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

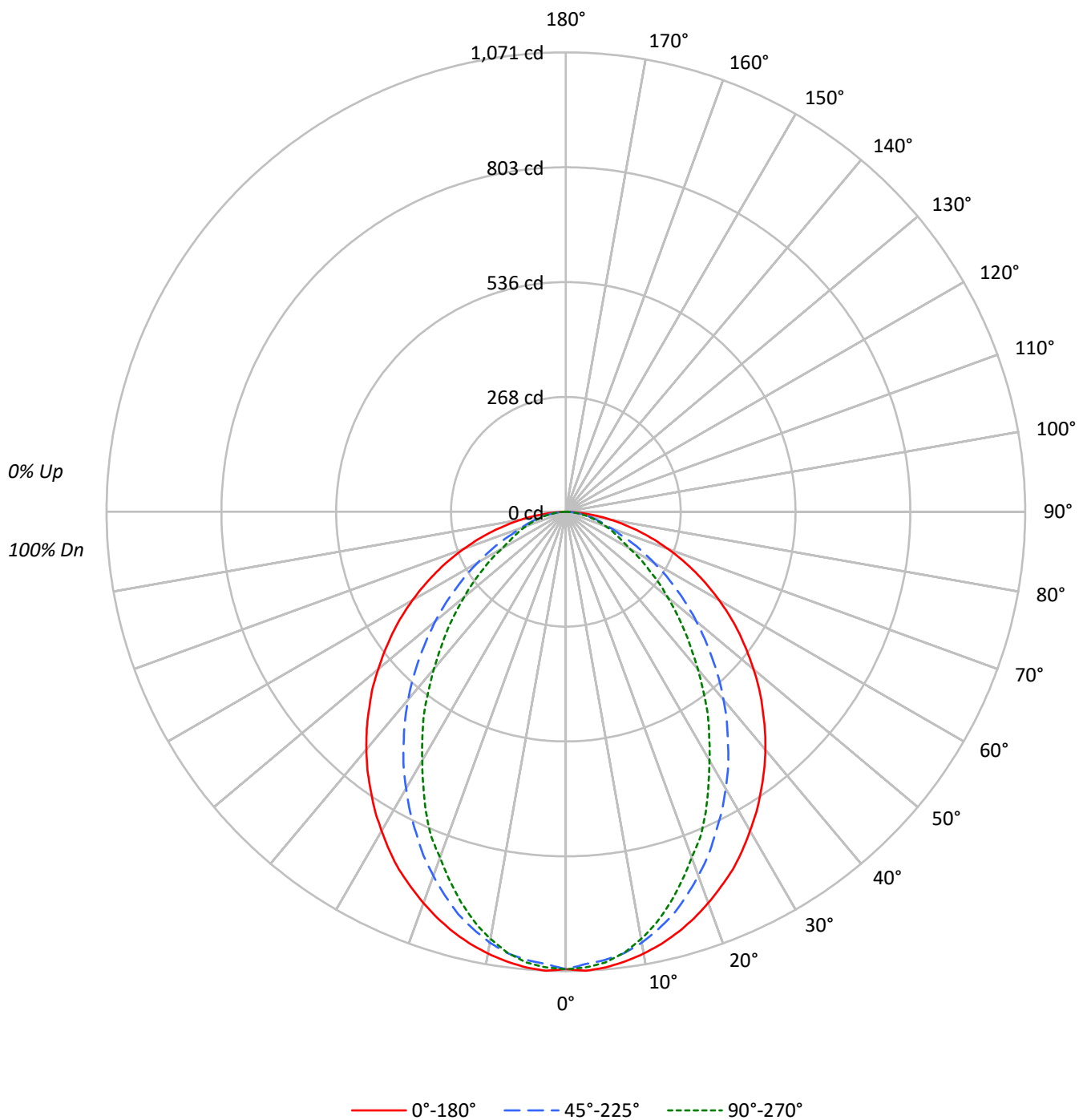
Lumens per Lamp: N/A
Luminaire Lumens: 2193.0 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	2670	2670	2670
5°	2680	2636	2651
10°	2660	2593	2572
15°	2629	2517	2444
20°	2587	2407	2286
25°	2543	2282	2133
30°	2483	2154	1936
35°	2425	2015	1764
40°	2366	1870	1565
45°	2296	1709	1384
50°	2226	1545	1207
55°	2152	1369	1036
60°	2068	1184	860
65°	1972	995	783
70°	1858	819	720
75°	1717	747	672
80°	1517	668	613
85°	1192	526	526

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2296 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.9	4.6
10°-20°	274.3	12.5
20°-30°	385.2	17.6
30°-40°	419.9	19.1
40°-50°	385.9	17.6
50°-60°	303.1	13.8
60°-70°	197.3	9.0
70°-80°	101.5	4.6
80°-90°	25.9	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°	759.4	34.6
0°-40°	1179.3	53.8
0°-60°	1868.3	85.2
0°-90°	2193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1066	1062	1049	1058	1055	101
15°	1014	1004	971	952	943	286
25°	921	890	826	786	772	423
35°	793	744	659	598	577	497
45°	648	584	482	414	391	501
55°	493	418	314	256	237	441
65°	333	255	168	135	132	330
75°	178	110	77	70	70	188
85°	42	21	18	18	18	50
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1071.1	1066.3	1055.6	1065.4	1063.5
5°	1066.3	1061.5	1048.9	1057.6	1054.7
7.5°	1057.6	1051.9	1038.4	1042.1	1037.3
10°	1046.0	1039.3	1020.0	1017.0	1011.4
12.5°	1031.6	1022.9	996.8	991.1	980.4
15°	1014.2	1003.5	970.8	952.4	942.8
17.5°	993.9	978.5	937.9	916.8	901.3
20°	970.8	951.4	903.2	879.2	857.8
22.5°	945.7	923.5	867.5	834.7	820.3
25°	920.6	889.7	826.0	786.5	771.9
27.5°	890.7	857.8	787.4	742.1	719.8
30°	858.9	822.2	744.9	695.8	669.7
32.5°	827.9	783.5	704.5	646.5	622.4
35°	793.3	744.0	659.1	598.3	577.1
37.5°	759.5	706.3	616.6	550.0	526.0
40°	723.8	665.9	572.2	503.7	478.7
42.5°	687.1	625.4	527.9	456.4	432.3
45°	648.5	583.8	482.5	413.9	390.8
47.5°	611.8	543.3	439.1	370.5	349.3
50°	571.3	502.8	396.6	330.0	309.8
52.5°	531.7	459.3	356.1	292.4	274.1
55°	493.0	417.8	313.6	255.8	237.4
57.5°	453.6	376.3	276.1	222.0	206.5
60°	413.0	335.8	236.4	187.2	171.8
62.5°	373.5	296.3	202.6	156.3	148.7
65°	332.9	254.7	167.9	135.1	132.2
67.5°	294.4	216.1	135.1	118.7	115.8
70°	253.8	178.5	111.9	102.3	98.4
72.5°	215.2	143.7	93.6	85.9	83.9
75°	177.5	110.0	77.2	70.4	69.5
77.5°	139.9	78.1	60.8	56.9	55.0
80°	105.2	56.0	46.3	42.5	42.5
82.5°	73.3	37.7	31.8	29.9	29.9
85°	41.5	21.2	18.3	18.3	18.3
87.5°	15.5	7.7	7.7	6.8	6.8
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	14.65	16.17	15.01	16.48	16.80	10.61	12.13	10.97	12.44	12.76
	3H	16.41	17.78	16.79	18.10	18.47	11.87	13.24	12.25	13.57	13.93
	4H	17.08	18.36	17.48	18.71	19.09	12.37	13.66	12.77	14.00	14.38
	6H	17.57	18.75	17.98	19.12	19.51	12.76	13.94	13.17	14.31	14.70
	8H	17.73	18.86	18.16	19.25	19.65	12.88	14.01	13.31	14.40	14.80
	12H	17.84	18.91	18.27	19.30	19.73	12.96	14.04	13.39	14.42	14.85
4H	2H	14.75	16.03	15.15	16.38	16.76	11.30	12.58	11.70	12.93	13.31
	3H	16.68	17.75	17.09	18.15	18.55	12.75	13.81	13.16	14.21	14.61
	4H	17.43	18.39	17.87	18.81	19.24	13.35	14.30	13.78	14.72	15.16
	6H	18.03	18.86	18.48	19.30	19.76	13.83	14.67	14.29	15.11	15.57
	8H	18.24	19.02	18.70	19.46	19.93	14.00	14.77	14.46	15.22	15.68
	12H	18.39	19.09	18.88	19.57	20.04	14.11	14.81	14.59	15.29	15.76
8H	4H	17.46	18.23	17.92	18.68	19.15	13.70	14.48	14.16	14.92	15.39
	6H	18.09	18.74	18.59	19.23	19.71	14.29	14.93	14.78	15.42	15.90
	8H	18.35	18.92	18.86	19.43	19.92	14.51	15.08	15.02	15.59	16.08
	12H	18.55	19.06	19.06	19.55	20.12	14.69	15.20	15.20	15.69	16.25
12H	4H	17.44	18.14	17.92	18.61	19.09	13.74	14.44	14.22	14.92	15.39
	6H	18.08	18.65	18.59	19.16	19.65	14.35	14.93	14.86	15.44	15.92
	8H	18.36	18.87	18.87	19.36	19.93	14.62	15.13	15.13	15.62	16.19