

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: P930789

Luminaire Tested: DFN2DS-PN4F0-120DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930789
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-PN4F0-120DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

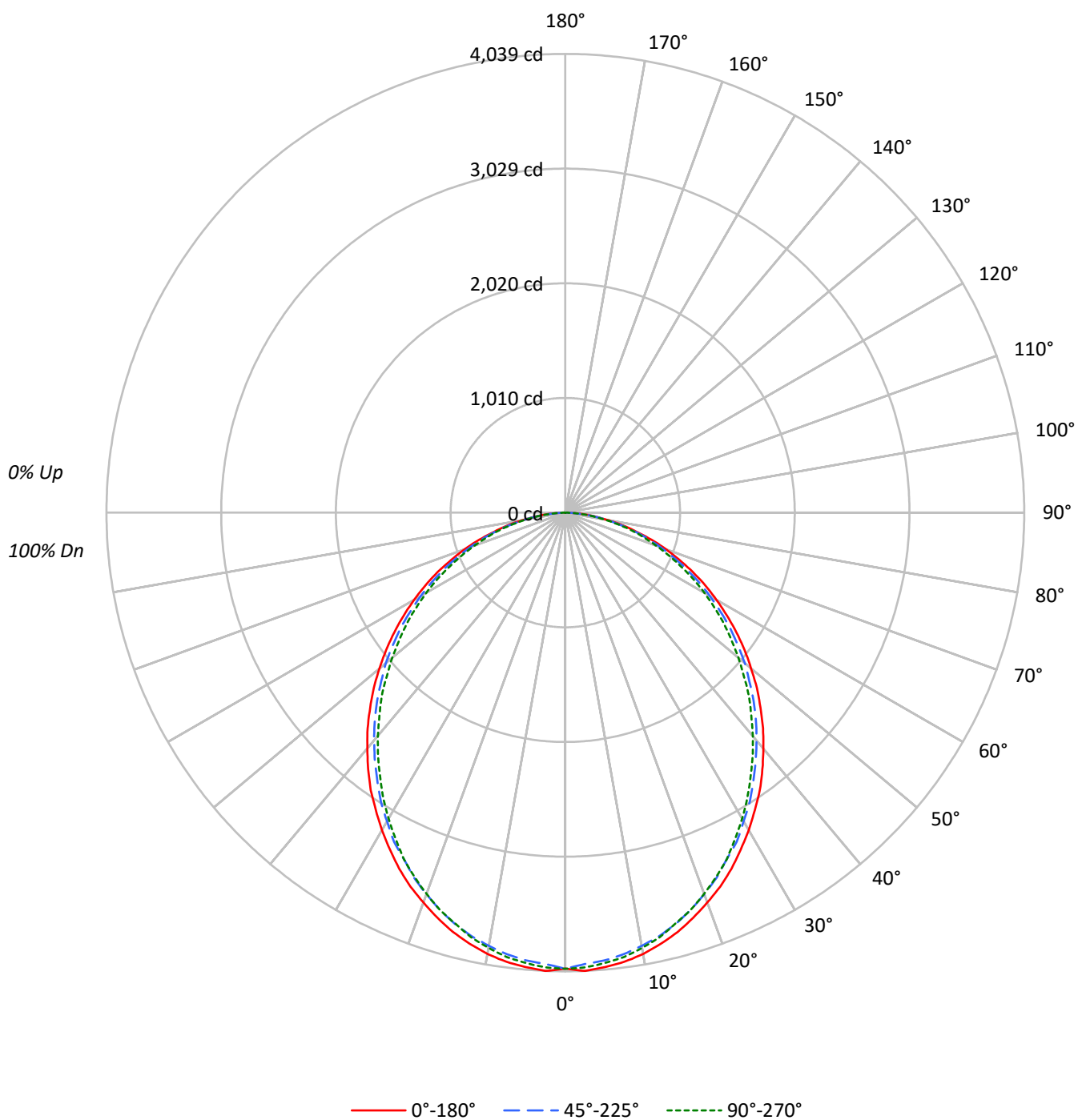
Lumens per Lamp: N/A
Luminaire Lumens: 10216.8 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 131
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	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°	2931	2931	2931
5°	2942	2900	2917
10°	2925	2871	2885
15°	2889	2833	2831
20°	2837	2778	2775
25°	2786	2709	2709
30°	2721	2646	2623
35°	2660	2570	2532
40°	2583	2494	2447
45°	2507	2419	2360
50°	2425	2341	2258
55°	2339	2251	2167
60°	2243	2142	2063
65°	2141	2034	1941
70°	2011	1903	1813
75°	1829	1753	1710
80°	1624	1574	1493
85°	1325	1263	1132

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2507 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.9	3.7
10°-20°	1063.4	10.4
20°-30°	1562.8	15.3
30°-40°	1815.1	17.8
40°-50°	1812.8	17.7
50°-60°	1580.7	15.5
60°-70°	1168.5	11.4
70°-80°	661.1	6.5
80°-90°	174.5	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°	3004.1	29.4
0°-40°	4819.2	47.2
0°-60°	8212.7	80.4
0°-90°	10216.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10216.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4016	4016	4016	4016	4016	
5°	4016	4000	3958	3988	3981	381
15°	3823	3800	3749	3765	3746	1077
25°	3460	3429	3363	3371	3363	1592
35°	2985	2946	2884	2861	2842	1864
45°	2429	2402	2344	2302	2286	1875
55°	1838	1815	1768	1722	1703	1643
65°	1240	1216	1178	1143	1124	1226
75°	648	641	621	599	606	692
85°	158	154	151	139	135	186
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4038.9	4019.6	3977.1	4015.6	4008.2
5°	4015.6	4000.4	3957.8	3988.5	3981.1
7.5°	3988.5	3965.5	3923.0	3954.1	3946.4
10°	3946.4	3919.3	3873.0	3903.7	3892.3
12.5°	3888.1	3865.2	3818.9	3838.2	3830.4
15°	3822.6	3799.7	3749.3	3764.8	3745.6
17.5°	3741.5	3718.6	3668.2	3687.4	3668.2
20°	3652.6	3629.6	3575.6	3587.1	3571.9
22.5°	3564.1	3529.3	3478.9	3478.9	3471.1
25°	3459.6	3428.9	3363.4	3370.8	3363.4
27.5°	3343.7	3316.7	3266.7	3255.2	3236.0
30°	3228.2	3197.0	3139.3	3127.8	3112.3
32.5°	3104.4	3081.6	3019.6	2996.3	2980.8
35°	2984.8	2946.4	2884.4	2861.1	2841.9
37.5°	2849.6	2814.9	2752.9	2725.9	2706.7
40°	2710.8	2679.7	2617.8	2583.4	2567.8
42.5°	2575.6	2544.5	2483.0	2444.1	2421.2
45°	2428.9	2401.9	2343.7	2301.5	2286.0
47.5°	2286.0	2258.9	2197.0	2154.5	2131.5
50°	2135.2	2115.9	2061.8	2007.8	1988.5
52.5°	1988.5	1961.5	1911.5	1868.9	1841.9
55°	1838.2	1814.9	1768.5	1722.2	1703.0
57.5°	1687.4	1668.1	1617.7	1571.5	1555.9
60°	1536.6	1521.5	1467.4	1424.8	1413.3
62.5°	1390.0	1362.9	1324.5	1286.0	1270.4
65°	1239.7	1216.3	1177.8	1142.9	1123.8
67.5°	1085.2	1065.5	1031.1	1004.1	988.6
70°	942.2	926.6	891.8	864.8	849.7
72.5°	795.6	780.0	760.8	733.8	722.2
75°	648.5	641.1	621.4	598.6	606.3
77.5°	517.4	501.8	494.1	482.5	471.1
80°	386.3	382.2	374.4	363.0	355.2
82.5°	262.6	262.6	258.9	243.4	243.4
85°	158.2	154.5	150.8	138.9	135.2
87.5°	69.7	61.8	54.1	42.6	38.5
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	15.02	16.63	15.38	16.94	17.26	14.57	16.19	14.94	16.50	16.81
	3H	16.77	18.22	17.15	18.55	18.91	16.28	17.73	16.65	18.06	18.42
	4H	17.42	18.78	17.81	19.13	19.51	16.92	18.29	17.32	18.64	19.01
	6H	17.88	19.15	18.30	19.52	19.91	17.38	18.65	17.79	19.02	19.41
	8H	18.03	19.24	18.45	19.63	20.03	17.52	18.74	17.95	19.12	19.52
	12H	18.12	19.28	18.55	19.66	20.09	17.61	18.77	18.04	19.15	19.58
4H	2H	15.58	16.95	15.98	17.30	17.67	15.23	16.60	15.62	16.94	17.32
	3H	17.55	18.70	17.96	19.10	19.50	17.15	18.29	17.56	18.69	19.09
	4H	18.33	19.37	18.76	19.78	20.22	17.91	18.94	18.34	19.36	19.79
	6H	18.93	19.83	19.38	20.27	20.73	18.50	19.40	18.95	19.84	20.30
	8H	19.12	19.96	19.58	20.41	20.87	18.68	19.53	19.14	19.97	20.43
	12H	19.25	20.01	19.73	20.48	20.95	18.80	19.56	19.28	20.03	20.50
8H	4H	18.60	19.45	19.06	19.89	20.36	18.23	19.08	18.69	19.52	19.98
	6H	19.32	20.02	19.81	20.51	20.99	18.94	19.64	19.43	20.13	20.60
	8H	19.58	20.21	20.09	20.72	21.20	19.19	19.82	19.70	20.32	20.81
	12H	19.78	20.34	20.28	20.83	21.39	19.36	19.92	19.87	20.41	20.97
12H	4H	18.63	19.39	19.11	19.87	20.34	18.27	19.03	18.75	19.50	19.97
	6H	19.36	20.00	19.87	20.50	20.99	19.00	19.63	19.51	20.13	20.62
	8H	19.68	20.24	20.18	20.73	21.29	19.30	19.86	19.81	20.35	20.91

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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