

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: P930493

Luminaire Tested: DFN2DS-PN2F0-060DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930493
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-PN2F0-060DS840-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

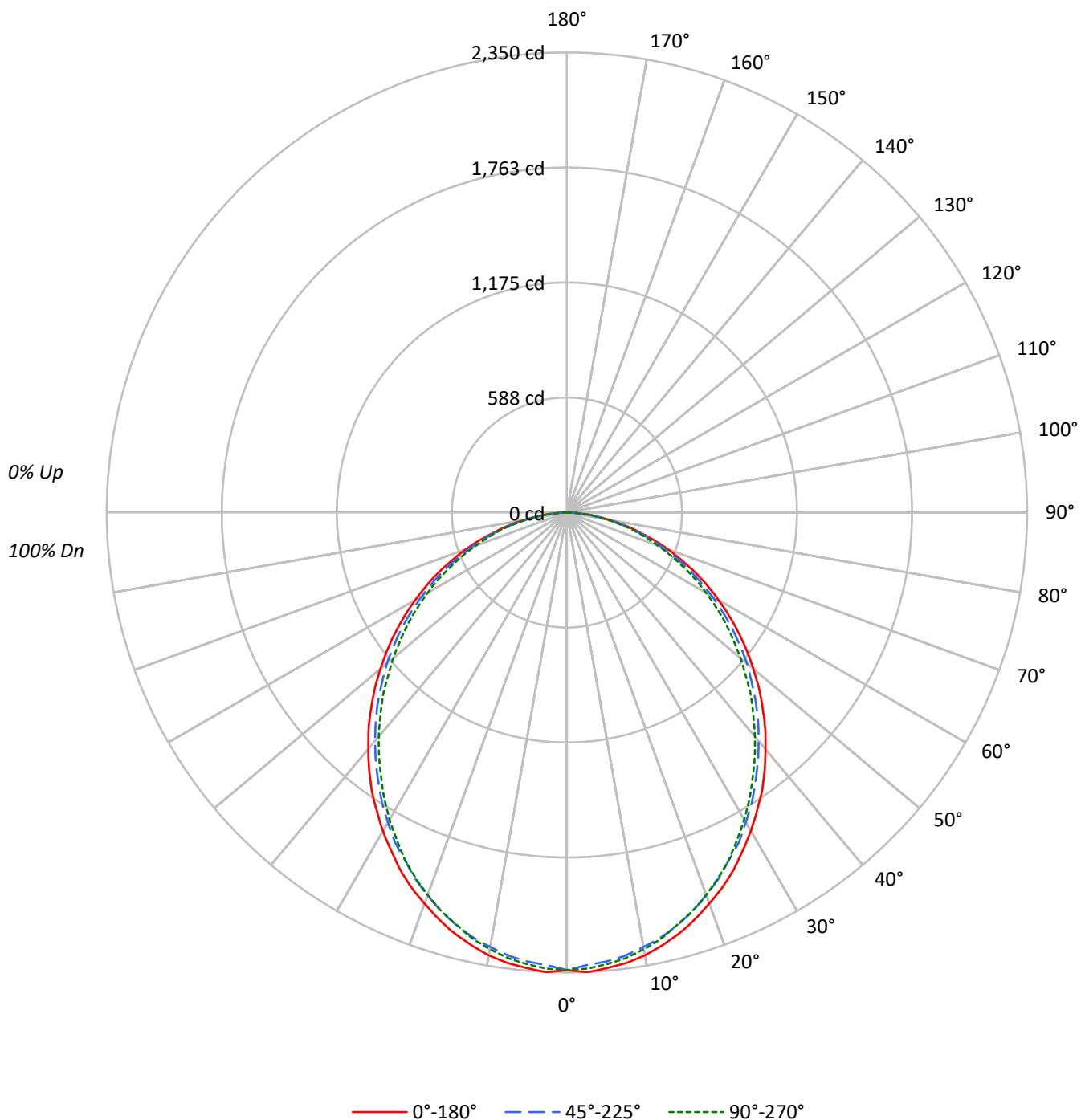
Lumens per Lamp: N/A
Luminaire Lumens: 5945.9 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 67.6
Input Voltage (V): 120
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

TEST NUMBER: P930493

CATALOG NUMBER: DFN2DS-PN2F0-060DS840-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930493

CATALOG NUMBER: DFN2DS-PN2F0-060DS840-FLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10		0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102		100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86		84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73		71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62		60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54		51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47		45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41		39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37		35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33		31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30		28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27		26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5061	5061	5061
5°	5081	5008	5037
10°	5051	4957	4982
15°	4988	4893	4888
20°	4899	4796	4791
25°	4812	4678	4678
30°	4699	4569	4530
35°	4593	4439	4373
40°	4460	4307	4225
45°	4330	4178	4075
50°	4187	4043	3900
55°	4040	3886	3742
60°	3874	3700	3563
65°	3697	3513	3352
70°	3472	3287	3131
75°	3158	3027	2953
80°	2804	2718	2578
85°	2286	2179	1956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4330 cd/sqm

TEST NUMBER: P930493

CATALOG NUMBER: DFN2DS-PN2F0-060DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.0	3.7
10°-20°	618.9	10.4
20°-30°	909.5	15.3
30°-40°	1056.3	17.8
40°-50°	1055.0	17.7
50°-60°	919.9	15.5
60°-70°	680.0	11.4
70°-80°	384.8	6.5
80°-90°	101.5	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°	1748.3	29.4
0°-40°	2804.6	47.2
0°-60°	4779.6	80.4
0°-90°	5945.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5945.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2337	2328	2303	2321	2317	222
15°	2225	2211	2182	2191	2180	627
25°	2013	1996	1957	1962	1957	926
35°	1737	1715	1679	1665	1654	1085
45°	1414	1398	1364	1339	1330	1091
55°	1070	1056	1029	1002	991	956
65°	721	708	686	665	654	713
75°	377	373	362	348	353	403
85°	92	90	88	81	79	108
90°	0	0	0	0	0	

TEST NUMBER: P930493

CATALOG NUMBER: DFN2DS-PN2F0-060DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2336.9	2336.9	2336.9	2336.9	2336.9
2.5°	2350.5	2339.3	2314.5	2336.9	2332.6
5°	2336.9	2328.1	2303.3	2321.2	2316.9
7.5°	2321.2	2307.9	2283.1	2301.2	2296.7
10°	2296.7	2281.0	2254.0	2271.9	2265.2
12.5°	2262.9	2249.4	2222.5	2233.7	2229.2
15°	2224.6	2211.3	2182.0	2191.1	2179.9
17.5°	2177.5	2164.2	2134.8	2145.9	2134.8
20°	2125.7	2112.4	2080.9	2087.6	2078.8
22.5°	2074.3	2054.0	2024.6	2024.6	2020.1
25°	2013.4	1995.6	1957.4	1961.7	1957.4
27.5°	1945.9	1930.2	1901.1	1894.5	1883.3
30°	1878.8	1860.6	1827.0	1820.3	1811.2
32.5°	1806.7	1793.4	1757.4	1743.7	1734.7
35°	1737.1	1714.7	1678.7	1665.1	1653.9
37.5°	1658.5	1638.1	1602.2	1586.4	1575.2
40°	1577.6	1559.5	1523.5	1503.5	1494.4
42.5°	1498.9	1480.8	1445.0	1422.4	1409.0
45°	1413.6	1397.8	1364.0	1339.4	1330.3
47.5°	1330.3	1314.6	1278.7	1253.9	1240.4
50°	1242.6	1231.4	1200.0	1168.5	1157.3
52.5°	1157.3	1141.5	1112.4	1087.7	1072.0
55°	1069.8	1056.2	1029.2	1002.3	991.1
57.5°	982.1	970.9	941.5	914.6	905.5
60°	894.3	885.5	854.1	829.2	822.5
62.5°	808.9	793.2	770.8	748.3	739.3
65°	721.4	707.9	685.5	665.2	654.0
67.5°	631.5	620.1	600.1	584.4	575.3
70°	548.3	539.3	519.0	503.3	494.5
72.5°	463.0	454.0	442.7	427.0	420.3
75°	377.4	373.2	361.7	348.3	352.9
77.5°	301.1	292.1	287.5	280.9	274.2
80°	224.8	222.4	217.9	211.2	206.7
82.5°	152.9	152.9	150.7	141.6	141.6
85°	92.0	89.9	87.7	80.8	78.7
87.5°	40.5	36.0	31.4	24.8	22.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930493

CATALOG NUMBER: DFN2DS-PN2F0-060DS840-FLL

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	16.92	18.53	17.28	18.84	19.16	16.47	18.08	16.84	18.40	18.71
	3H	18.67	20.12	19.04	20.45	20.81	18.18	19.63	18.55	19.96	20.32
	4H	19.31	20.68	19.71	21.03	21.41	18.82	20.19	19.22	20.54	20.91
	6H	19.78	21.05	20.19	21.42	21.81	19.28	20.55	19.69	20.91	21.31
	8H	19.93	21.14	20.35	21.53	21.92	19.42	20.63	19.85	21.02	21.42
	12H	20.02	21.18	20.45	21.56	21.99	19.50	20.66	19.93	21.05	21.47
4H	2H	17.48	18.85	17.88	19.19	19.57	17.12	18.49	17.52	18.84	19.22
	3H	19.45	20.60	19.86	21.00	21.40	19.05	20.19	19.46	20.59	20.99
	4H	20.23	21.26	20.66	21.68	22.11	19.81	20.84	20.24	21.25	21.69
	6H	20.83	21.73	21.28	22.17	22.63	20.39	21.30	20.85	21.74	22.19
	8H	21.02	21.86	21.48	22.30	22.77	20.58	21.42	21.04	21.87	22.33
	12H	21.15	21.91	21.63	22.38	22.85	20.69	21.45	21.17	21.93	22.40
8H	4H	20.50	21.35	20.96	21.79	22.26	20.13	20.97	20.59	21.42	21.88
	6H	21.22	21.92	21.71	22.41	22.88	20.84	21.54	21.33	22.03	22.50
	8H	21.48	22.11	21.99	22.61	23.10	21.08	21.71	21.59	22.22	22.71
	12H	21.68	22.23	22.18	22.72	23.29	21.26	21.82	21.77	22.31	22.87
12H	4H	20.53	21.29	21.01	21.76	22.23	20.16	20.92	20.64	21.40	21.87
	6H	21.26	21.89	21.77	22.40	22.89	20.89	21.53	21.40	22.03	22.52
	8H	21.58	22.13	22.08	22.62	23.19	21.20	21.76	21.70	22.25	22.81