

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: P930753

Luminaire Tested: DFN2DS-PN4F0-100DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930753
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-PN4F0-100DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

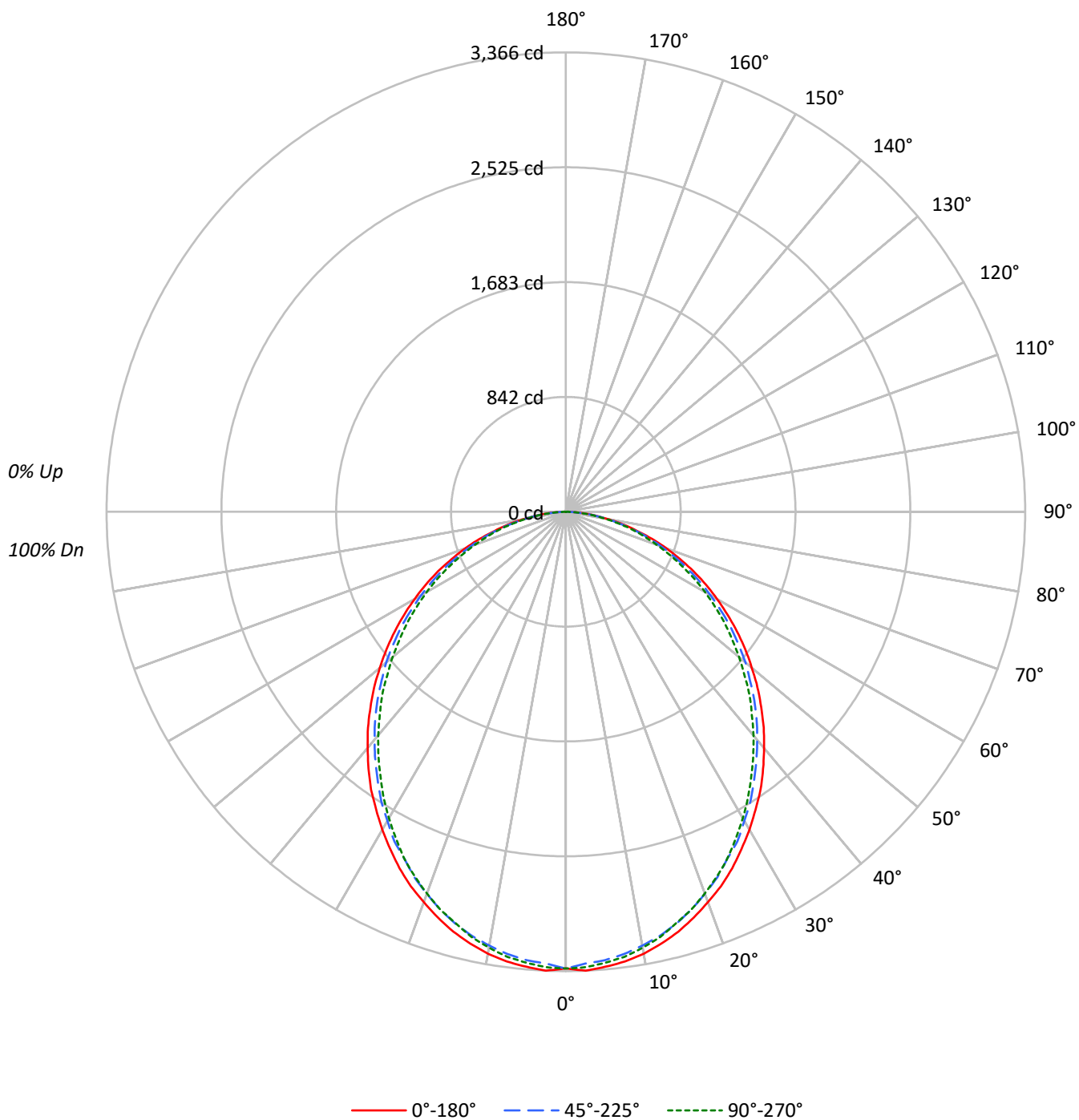
Lumens per Lamp: N/A
Luminaire Lumens: 8514.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 105.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
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°	2443	2443	2443
5°	2452	2417	2431
10°	2438	2392	2404
15°	2407	2361	2359
20°	2364	2315	2312
25°	2322	2257	2257
30°	2268	2205	2186
35°	2217	2142	2110
40°	2153	2079	2039
45°	2090	2016	1967
50°	2021	1951	1882
55°	1949	1876	1806
60°	1869	1785	1719
65°	1784	1695	1618
70°	1676	1586	1511
75°	1524	1461	1425
80°	1353	1312	1244
85°	1104	1052	944

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2090 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	3.7
10°-20°	886.2	10.4
20°-30°	1302.3	15.3
30°-40°	1512.5	17.8
40°-50°	1510.7	17.7
50°-60°	1317.3	15.5
60°-70°	973.7	11.4
70°-80°	550.9	6.5
80°-90°	145.4	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°	2503.4	29.4
0°-40°	4016.0	47.2
0°-60°	6843.9	80.4
0°-90°	8514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3346	3334	3298	3324	3318	318
15°	3186	3166	3124	3137	3121	897
25°	2883	2857	2803	2809	2803	1327
35°	2487	2455	2404	2384	2368	1553
45°	2024	2002	1953	1918	1905	1562
55°	1532	1512	1474	1435	1419	1369
65°	1033	1014	982	952	936	1021
75°	540	534	518	499	505	577
85°	132	129	126	116	113	155
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3346.3	3346.3	3346.3	3346.3	3346.3
2.5°	3365.8	3349.7	3314.2	3346.3	3340.2
5°	3346.3	3333.7	3298.2	3323.8	3317.6
7.5°	3323.8	3304.6	3269.1	3295.1	3288.6
10°	3288.6	3266.1	3227.5	3253.1	3243.6
12.5°	3240.1	3221.0	3182.4	3198.5	3192.0
15°	3185.5	3166.4	3124.4	3137.4	3121.4
17.5°	3117.9	3098.8	3056.8	3072.9	3056.8
20°	3043.8	3024.7	2979.6	2989.2	2976.5
22.5°	2970.1	2941.1	2899.1	2899.1	2892.6
25°	2883.1	2857.4	2802.8	2808.9	2802.8
27.5°	2786.4	2763.9	2722.2	2712.7	2696.6
30°	2690.2	2664.2	2616.0	2606.5	2593.5
32.5°	2587.1	2568.0	2516.4	2496.9	2483.9
35°	2487.4	2455.3	2403.7	2384.3	2368.2
37.5°	2374.7	2345.6	2294.1	2271.6	2255.5
40°	2259.0	2233.0	2181.5	2152.8	2139.9
42.5°	2146.3	2120.3	2069.2	2036.7	2017.6
45°	2024.1	2001.6	1953.1	1917.9	1905.0
47.5°	1905.0	1882.5	1830.9	1795.3	1776.2
50°	1779.3	1763.3	1718.2	1673.1	1657.1
52.5°	1657.1	1634.6	1592.9	1557.5	1534.9
55°	1531.8	1512.4	1473.8	1435.2	1419.2
57.5°	1406.2	1390.1	1348.1	1309.6	1296.6
60°	1280.5	1267.9	1222.8	1187.3	1177.8
62.5°	1158.3	1135.8	1103.7	1071.6	1058.7
65°	1033.0	1013.6	981.5	952.4	936.5
67.5°	904.4	888.0	859.3	836.8	823.8
70°	785.2	772.2	743.2	720.7	708.0
72.5°	663.0	650.0	634.0	611.5	601.8
75°	540.4	534.3	517.9	498.8	505.2
77.5°	431.2	418.2	411.7	402.1	392.6
80°	321.9	318.5	312.0	302.5	296.0
82.5°	218.9	218.9	215.8	202.8	202.8
85°	131.8	128.7	125.6	115.8	112.7
87.5°	58.0	51.5	45.1	35.5	32.1
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	14.39	16.00	14.75	16.31	16.62	13.94	15.55	14.31	15.87	16.18
	3H	16.14	17.59	16.51	17.92	18.28	15.64	17.10	16.02	17.43	17.79
	4H	16.78	18.15	17.18	18.50	18.87	16.29	17.66	16.69	18.00	18.38
	6H	17.25	18.52	17.66	18.88	19.28	16.75	18.02	17.16	18.38	18.77
	8H	17.39	18.60	17.82	18.99	19.39	16.89	18.10	17.32	18.49	18.89
	12H	17.48	18.64	17.91	19.03	19.45	16.97	18.13	17.40	18.51	18.94
4H	2H	14.95	16.31	15.34	16.66	17.04	14.59	15.96	14.99	16.31	16.69
	3H	16.92	18.07	17.33	18.47	18.87	16.51	17.66	16.92	18.06	18.46
	4H	17.70	18.73	18.13	19.15	19.58	17.27	18.31	17.71	18.72	19.16
	6H	18.29	19.20	18.75	19.64	20.10	17.86	18.77	18.32	19.21	19.66
	8H	18.48	19.33	18.94	19.77	20.24	18.05	18.89	18.51	19.33	19.80
	12H	18.62	19.38	19.10	19.85	20.32	18.16	18.92	18.64	19.40	19.87
8H	4H	17.97	18.82	18.43	19.26	19.73	17.60	18.44	18.06	18.89	19.35
	6H	18.69	19.39	19.18	19.88	20.35	18.30	19.01	18.80	19.50	19.97
	8H	18.94	19.58	19.45	20.08	20.57	18.55	19.18	19.06	19.69	20.18
	12H	19.14	19.70	19.65	20.19	20.75	18.73	19.29	19.24	19.78	20.34
12H	4H	18.00	18.76	18.48	19.23	19.70	17.63	18.39	18.11	18.87	19.34
	6H	18.73	19.36	19.24	19.87	20.36	18.36	18.99	18.87	19.50	19.99
	8H	19.04	19.60	19.55	20.09	20.65	18.67	19.22	19.17	19.71	20.28