

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: P930721

Luminaire Tested: DFN2DS-PN4F0-080DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930721
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-PN4F0-080DS950-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

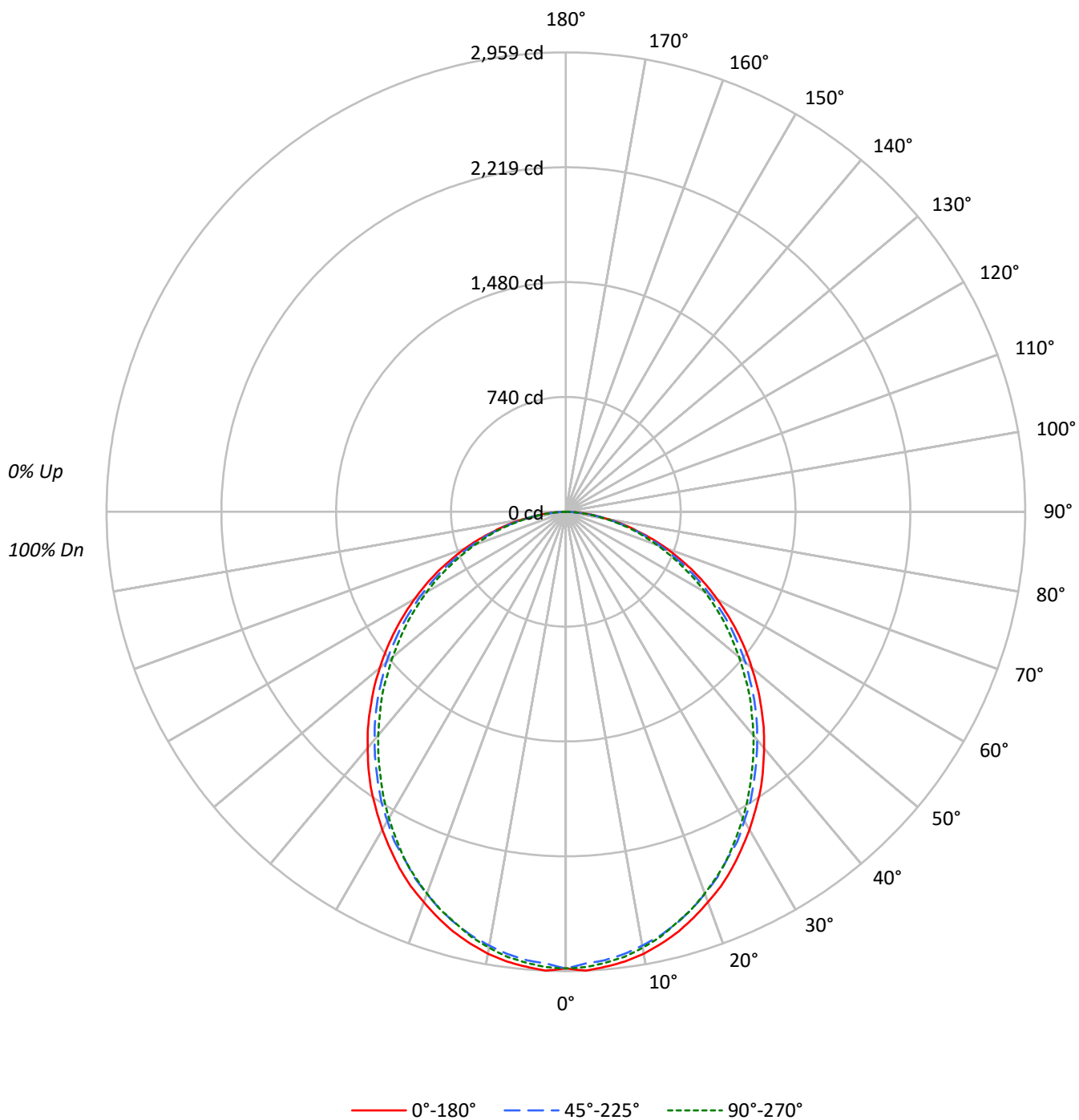
Lumens per Lamp: N/A
Luminaire Lumens: 7484.4 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 81.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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°	2147	2147	2147
5°	2155	2125	2137
10°	2143	2103	2113
15°	2116	2076	2074
20°	2079	2035	2033
25°	2041	1984	1984
30°	1993	1938	1922
35°	1948	1883	1855
40°	1892	1827	1792
45°	1837	1772	1729
50°	1776	1715	1654
55°	1714	1649	1588
60°	1643	1569	1511
65°	1568	1490	1422
70°	1473	1395	1328
75°	1340	1284	1253
80°	1190	1153	1094
85°	971	925	829

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1837 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.9	3.7
10°-20°	779.0	10.4
20°-30°	1144.8	15.3
30°-40°	1329.6	17.8
40°-50°	1328.0	17.7
50°-60°	1158.0	15.5
60°-70°	856.0	11.4
70°-80°	484.3	6.5
80°-90°	127.8	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°	2200.7	29.4
0°-40°	3530.3	47.2
0°-60°	6016.3	80.4
0°-90°	7484.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7484.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2942	2942	2942	2942	2942	
5°	2942	2930	2899	2922	2916	279
15°	2800	2784	2746	2758	2744	789
25°	2534	2512	2464	2469	2464	1166
35°	2186	2158	2113	2096	2082	1365
45°	1779	1760	1717	1686	1675	1373
55°	1346	1329	1296	1262	1248	1204
65°	908	891	863	837	823	898
75°	475	470	455	438	444	507
85°	116	113	110	102	99	136
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2941.6	2941.6	2941.6	2941.6	2941.6
2.5°	2958.7	2944.6	2913.4	2941.6	2936.2
5°	2941.6	2930.5	2899.4	2921.8	2916.5
7.5°	2921.8	2905.0	2873.8	2896.6	2890.9
10°	2890.9	2871.1	2837.2	2859.7	2851.3
12.5°	2848.3	2831.5	2797.6	2811.7	2806.0
15°	2800.3	2783.5	2746.5	2758.0	2743.9
17.5°	2740.9	2724.1	2687.1	2701.3	2687.1
20°	2675.8	2658.9	2619.4	2627.8	2616.6
22.5°	2610.9	2585.4	2548.5	2548.5	2542.8
25°	2534.4	2511.9	2463.9	2469.3	2463.9
27.5°	2449.4	2429.7	2393.0	2384.6	2370.5
30°	2364.9	2342.0	2299.8	2291.3	2279.9
32.5°	2274.2	2257.4	2212.1	2195.0	2183.6
35°	2186.5	2158.4	2113.0	2095.9	2081.8
37.5°	2087.5	2062.0	2016.7	1996.9	1982.8
40°	1985.8	1963.0	1917.7	1892.5	1881.0
42.5°	1886.8	1863.9	1818.9	1790.4	1773.7
45°	1779.3	1759.5	1716.9	1686.0	1674.6
47.5°	1674.6	1654.8	1609.4	1578.2	1561.4
50°	1564.2	1550.1	1510.4	1470.8	1456.7
52.5°	1456.7	1436.9	1400.3	1369.1	1349.3
55°	1346.5	1329.4	1295.6	1261.7	1247.5
57.5°	1236.2	1222.1	1185.1	1151.2	1139.8
60°	1125.7	1114.6	1074.9	1043.8	1035.3
62.5°	1018.2	998.5	970.2	942.1	930.6
65°	908.1	891.0	862.8	837.3	823.2
67.5°	794.9	780.6	755.3	735.6	724.2
70°	690.2	678.8	653.4	633.5	622.4
72.5°	582.8	571.4	557.3	537.5	529.1
75°	475.1	469.7	455.3	438.5	444.2
77.5°	379.0	367.6	361.9	353.5	345.1
80°	283.0	280.0	274.3	265.9	260.2
82.5°	192.4	192.4	189.7	178.2	178.2
85°	115.9	113.1	110.5	101.8	99.0
87.5°	51.0	45.4	39.6	31.2	28.3
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	13.94	15.55	14.30	15.86	16.18	13.49	15.10	13.86	15.42	15.73
	3H	15.69	17.14	16.06	17.47	17.83	15.20	16.65	15.57	16.98	17.34
	4H	16.33	17.70	16.73	18.05	18.43	15.84	17.21	16.24	17.56	17.93
	6H	16.80	18.07	17.21	18.44	18.83	16.30	17.57	16.71	17.94	18.33
	8H	16.95	18.16	17.37	18.55	18.95	16.44	17.65	16.87	18.04	18.44
	12H	17.04	18.20	17.47	18.58	19.01	16.52	17.68	16.95	18.07	18.49
4H	2H	14.50	15.87	14.90	16.22	16.59	14.15	15.51	14.54	15.86	16.24
	3H	16.47	17.62	16.88	18.02	18.42	16.07	17.21	16.48	17.61	18.01
	4H	17.25	18.29	17.68	18.70	19.14	16.83	17.86	17.26	18.28	18.71
	6H	17.85	18.75	18.30	19.19	19.65	17.41	18.32	17.87	18.76	19.22
	8H	18.04	18.88	18.50	19.32	19.79	17.60	18.44	18.06	18.89	19.35
	12H	18.17	18.93	18.65	19.40	19.87	17.72	18.48	18.20	18.95	19.42
8H	4H	17.52	18.37	17.98	18.81	19.28	17.15	18.00	17.61	18.44	18.90
	6H	18.24	18.94	18.73	19.43	19.90	17.86	18.56	18.35	19.05	19.52
	8H	18.50	19.13	19.01	19.63	20.12	18.10	18.74	18.61	19.24	19.73
	12H	18.70	19.25	19.20	19.74	20.31	18.28	18.84	18.79	19.33	19.89
12H	4H	17.55	18.31	18.03	18.78	19.25	17.18	17.94	17.66	18.42	18.89
	6H	18.28	18.91	18.79	19.42	19.91	17.91	18.55	18.42	19.05	19.54
	8H	18.60	19.15	19.10	19.65	20.21	18.22	18.78	18.73	19.27	19.83