

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: P930717

Luminaire Tested: DFN2DS-PN4F0-080DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930717
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-PN4F0-080DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

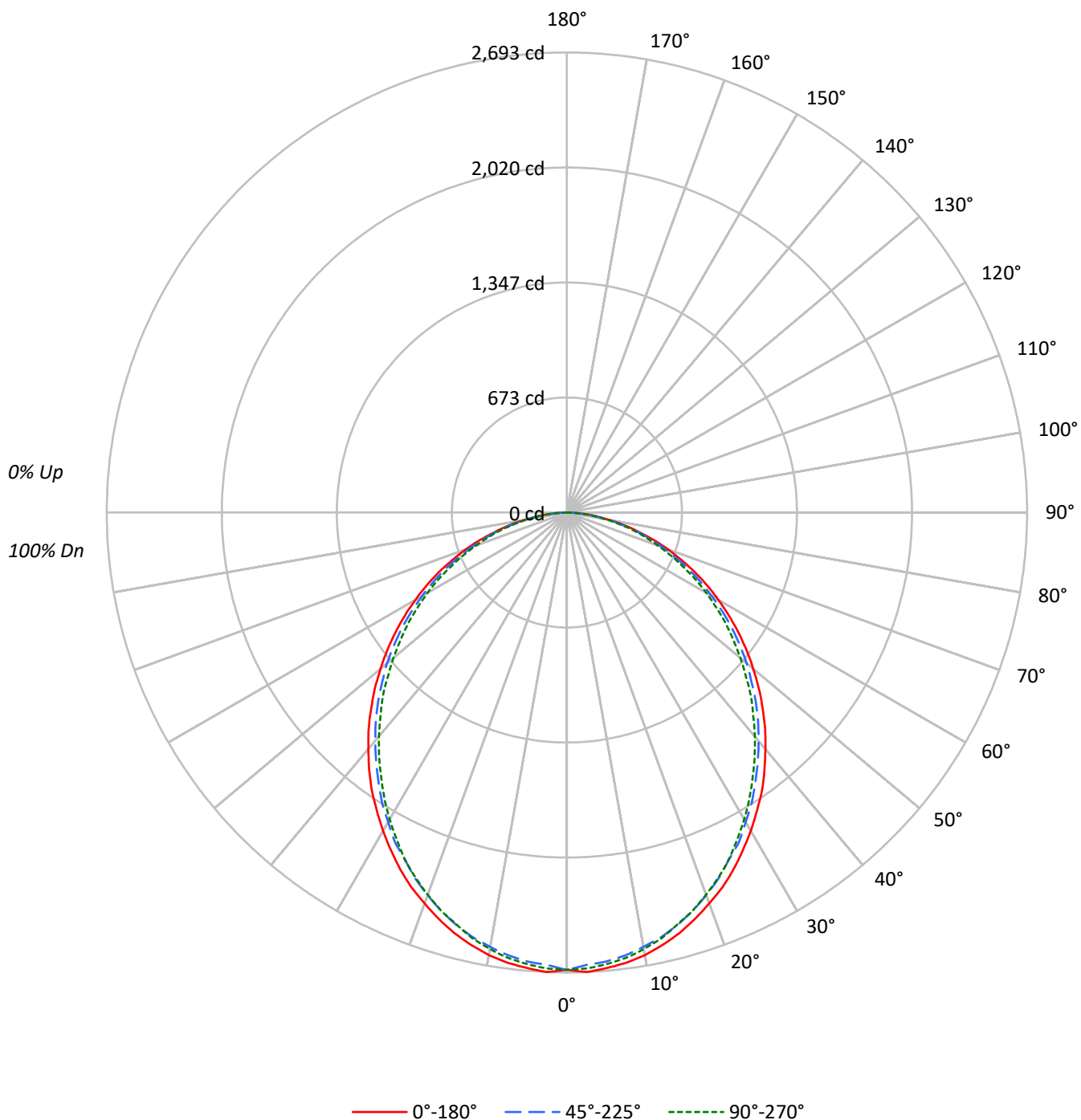
Lumens per Lamp: N/A
Luminaire Lumens: 6811.2 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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°	1954	1954	1954
5°	1962	1933	1945
10°	1950	1914	1923
15°	1926	1889	1887
20°	1892	1852	1850
25°	1858	1806	1806
30°	1814	1764	1749
35°	1773	1714	1688
40°	1722	1663	1631
45°	1672	1613	1573
50°	1617	1561	1505
55°	1559	1501	1445
60°	1496	1428	1376
65°	1428	1356	1294
70°	1341	1269	1209
75°	1219	1168	1140
80°	1083	1050	995
85°	883	842	755

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1672 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.0	3.7
10°-20°	708.9	10.4
20°-30°	1041.8	15.3
30°-40°	1210.0	17.8
40°-50°	1208.5	17.7
50°-60°	1053.8	15.5
60°-70°	779.0	11.4
70°-80°	440.7	6.5
80°-90°	116.3	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°	2002.7	29.4
0°-40°	3212.8	47.2
0°-60°	5475.1	80.4
0°-90°	6811.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6811.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2677	2677	2677	2677	2677	
5°	2677	2667	2639	2659	2654	254
15°	2548	2533	2500	2510	2497	718
25°	2306	2286	2242	2247	2242	1061
35°	1990	1964	1923	1907	1895	1243
45°	1619	1601	1562	1534	1524	1250
55°	1225	1210	1179	1148	1135	1096
65°	826	811	785	762	749	817
75°	432	427	414	399	404	462
85°	105	103	100	93	90	124
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2677.0	2677.0	2677.0	2677.0	2677.0
2.5°	2692.6	2679.8	2651.4	2677.0	2672.1
5°	2677.0	2666.9	2638.6	2659.0	2654.1
7.5°	2659.0	2643.7	2615.3	2636.1	2630.9
10°	2630.9	2612.9	2582.0	2602.4	2594.9
12.5°	2592.1	2576.8	2545.9	2558.8	2553.6
15°	2548.4	2533.1	2499.5	2509.9	2497.1
17.5°	2494.3	2479.0	2445.4	2458.3	2445.4
20°	2435.1	2419.8	2383.7	2391.4	2381.3
22.5°	2376.1	2352.9	2319.2	2319.2	2314.1
25°	2306.4	2286.0	2242.3	2247.2	2242.3
27.5°	2229.1	2211.1	2177.8	2170.1	2157.3
30°	2152.2	2131.3	2092.9	2085.2	2074.8
32.5°	2069.7	2054.4	2013.1	1997.5	1987.2
35°	1989.9	1964.2	1923.0	1907.4	1894.6
37.5°	1899.7	1876.5	1835.3	1817.3	1804.5
40°	1807.2	1786.4	1745.2	1722.2	1711.8
42.5°	1717.1	1696.3	1655.3	1629.4	1614.1
45°	1619.3	1601.2	1562.4	1534.3	1524.0
47.5°	1524.0	1505.9	1464.7	1436.3	1421.0
50°	1423.5	1410.7	1374.5	1338.5	1325.7
52.5°	1325.7	1307.6	1274.3	1246.0	1227.9
55°	1225.4	1209.8	1179.1	1148.2	1135.3
57.5°	1125.0	1112.2	1078.5	1047.7	1037.2
60°	1024.4	1014.4	978.2	949.9	942.2
62.5°	926.6	908.7	883.0	857.3	846.9
65°	826.5	810.9	785.2	762.0	749.1
67.5°	723.4	710.4	687.4	669.4	659.0
70°	628.1	617.7	594.6	576.5	566.4
72.5°	530.4	520.0	507.1	489.2	481.5
75°	432.3	427.4	414.3	399.0	404.2
77.5°	344.9	334.5	329.4	321.7	314.1
80°	257.6	254.8	249.7	242.0	236.8
82.5°	175.1	175.1	172.6	162.2	162.2
85°	105.4	102.9	100.5	92.6	90.1
87.5°	46.4	41.3	36.0	28.4	25.7
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	13.61	15.22	13.98	15.54	15.85	13.17	14.78	13.53	15.09	15.41
	3H	15.36	16.81	15.74	17.14	17.50	14.87	16.32	15.25	16.65	17.01
	4H	16.01	17.38	16.41	17.72	18.10	15.51	16.88	15.91	17.23	17.60
	6H	16.48	17.74	16.89	18.11	18.50	15.97	17.24	16.39	17.61	18.00
	8H	16.62	17.83	17.04	18.22	18.62	16.12	17.33	16.54	17.72	18.11
	12H	16.71	17.87	17.14	18.25	18.68	16.20	17.36	16.63	17.74	18.17
4H	2H	14.17	15.54	14.57	15.89	16.26	13.82	15.19	14.22	15.53	15.91
	3H	16.15	17.29	16.56	17.69	18.09	15.74	16.89	16.15	17.28	17.68
	4H	16.92	17.96	17.35	18.37	18.81	16.50	17.53	16.93	17.95	18.38
	6H	17.52	18.42	17.97	18.86	19.32	17.09	17.99	17.54	18.43	18.89
	8H	17.71	18.55	18.17	19.00	19.46	17.27	18.12	17.73	18.56	19.02
	12H	17.84	18.60	18.32	19.08	19.55	17.39	18.15	17.87	18.62	19.09
8H	4H	17.20	18.04	17.66	18.48	18.95	16.82	17.67	17.28	18.11	18.58
	6H	17.91	18.61	18.40	19.10	19.58	17.53	18.23	18.02	18.72	19.20
	8H	18.17	18.80	18.68	19.31	19.79	17.78	18.41	18.29	18.91	19.40
	12H	18.37	18.93	18.88	19.42	19.98	17.96	18.51	18.46	19.00	19.57
12H	4H	17.22	17.98	17.70	18.46	18.93	16.86	17.62	17.34	18.09	18.56
	6H	17.96	18.59	18.46	19.09	19.58	17.59	18.22	18.10	18.73	19.21
	8H	18.27	18.83	18.78	19.32	19.88	17.89	18.45	18.40	18.94	19.50