

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: P930573

Luminaire Tested: DFN2DS-PN3F0-060DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930573
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-PN3F0-060DS935-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

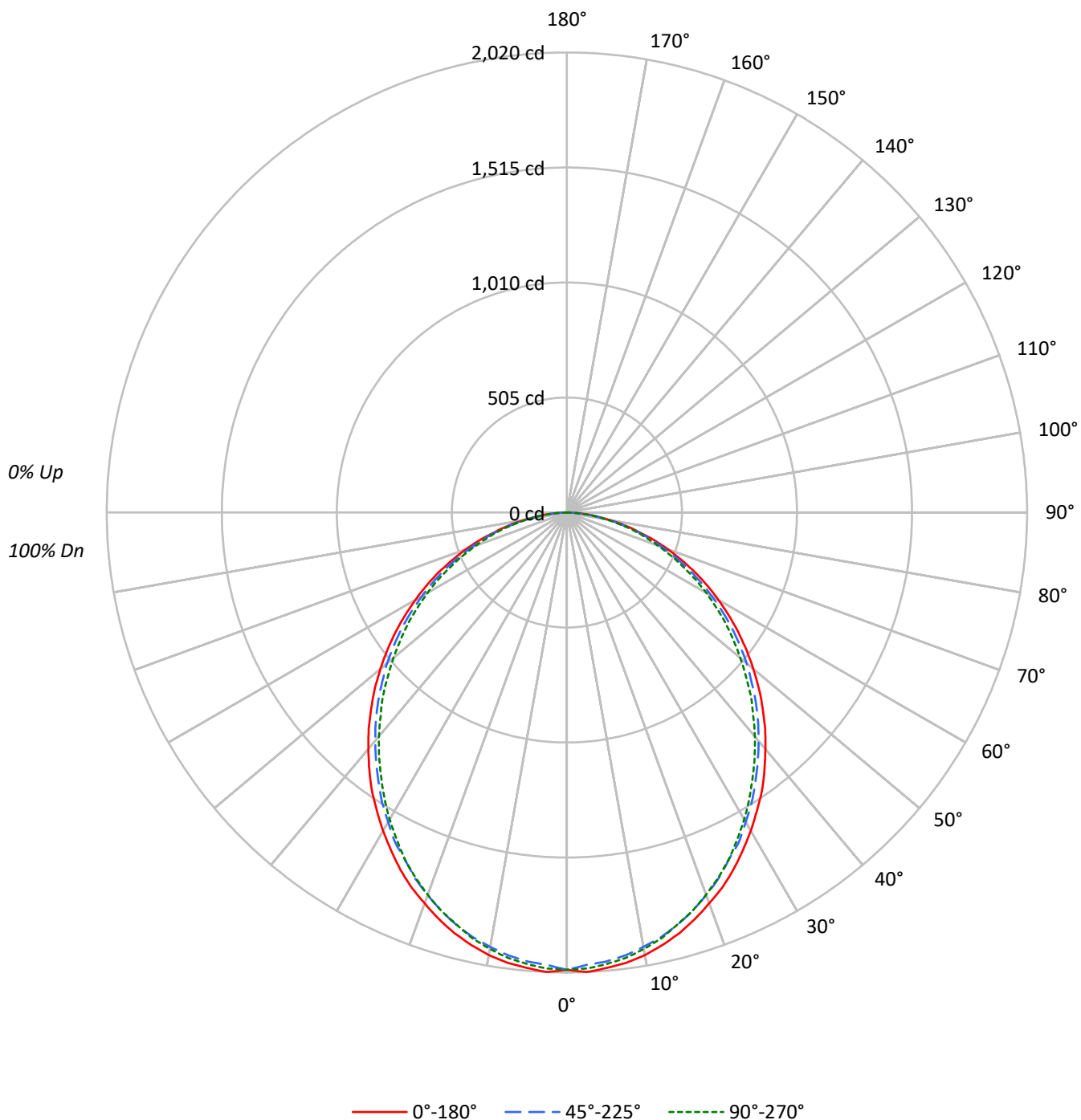
Lumens per Lamp: N/A
Luminaire Lumens: 5108.4 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 61.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9821
Total Harmonic Distortion (THDi): 0.08
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930573

CATALOG NUMBER: DFN2DS-PN3F0-060DS935-FLL

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°	2347	2347	2347
5°	2356	2322	2336
10°	2342	2299	2310
15°	2313	2269	2266
20°	2272	2224	2222
25°	2231	2169	2169
30°	2179	2119	2100
35°	2130	2058	2028
40°	2068	1997	1959
45°	2008	1937	1889
50°	1942	1875	1808
55°	1873	1802	1735
60°	1796	1716	1652
65°	1714	1629	1554
70°	1610	1524	1452
75°	1464	1403	1369
80°	1301	1260	1196
85°	1060	1010	907

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2008 cd/sqm

TEST NUMBER: P930573

CATALOG NUMBER: DFN2DS-PN3F0-060DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	3.7
10°-20°	531.7	10.4
20°-30°	781.4	15.3
30°-40°	907.5	17.8
40°-50°	906.4	17.7
50°-60°	790.4	15.5
60°-70°	584.3	11.4
70°-80°	330.6	6.5
80°-90°	87.2	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°	1502.1	29.4
0°-40°	2409.6	47.2
0°-60°	4106.3	80.4
0°-90°	5108.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5108.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2008	2008	2008	2008	2008	
5°	2008	2000	1979	1994	1991	191
15°	1911	1900	1875	1882	1873	538
25°	1730	1714	1682	1685	1682	796
35°	1492	1473	1442	1430	1421	932
45°	1214	1201	1172	1151	1143	937
55°	919	907	884	861	852	822
65°	620	608	589	572	562	613
75°	324	321	311	299	303	346
85°	79	77	75	69	68	93
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-PN3F0-060DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2007.8	2007.8	2007.8	2007.8	2007.8
2.5°	2019.5	2009.8	1988.5	2007.8	2004.1
5°	2007.8	2000.2	1978.9	1994.3	1990.6
7.5°	1994.3	1982.8	1961.5	1977.1	1973.2
10°	1973.2	1959.7	1936.5	1951.9	1946.1
12.5°	1944.1	1932.6	1909.5	1919.1	1915.2
15°	1911.3	1899.8	1874.6	1882.5	1872.8
17.5°	1870.8	1859.3	1834.1	1843.7	1834.1
20°	1826.3	1814.9	1787.8	1793.5	1786.0
22.5°	1782.1	1764.6	1739.4	1739.4	1735.6
25°	1729.8	1714.5	1681.6	1685.3	1681.6
27.5°	1671.8	1658.3	1633.3	1627.6	1618.0
30°	1614.1	1598.5	1569.7	1563.9	1556.1
32.5°	1552.2	1540.8	1509.8	1498.1	1490.4
35°	1492.4	1473.2	1442.2	1430.5	1420.9
37.5°	1424.8	1407.4	1376.5	1362.9	1353.3
40°	1355.4	1339.8	1308.9	1291.7	1283.9
42.5°	1287.8	1272.2	1241.5	1222.1	1210.5
45°	1214.5	1200.9	1171.8	1150.8	1142.9
47.5°	1142.9	1129.4	1098.6	1077.2	1065.7
50°	1067.6	1058.0	1031.0	1003.9	994.2
52.5°	994.2	980.7	955.7	934.5	921.0
55°	919.1	907.4	884.3	861.1	851.5
57.5°	843.7	834.1	808.9	785.8	778.0
60°	768.3	760.8	733.8	712.4	706.7
62.5°	695.0	681.5	662.2	642.9	635.2
65°	619.8	608.2	588.9	571.5	561.8
67.5°	542.6	532.8	515.6	502.1	494.2
70°	471.1	463.4	445.9	432.4	424.8
72.5°	397.8	390.0	380.4	366.9	361.1
75°	324.2	320.6	310.7	299.3	303.2
77.5°	258.7	250.9	247.0	241.3	235.6
80°	193.2	191.1	187.2	181.5	177.6
82.5°	131.3	131.3	129.4	121.7	121.7
85°	79.0	77.2	75.3	69.4	67.6
87.5°	34.8	31.0	27.0	21.3	19.3
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	14.25	15.86	14.61	16.17	16.49	13.80	15.41	14.17	15.73	16.04
	3H	16.00	17.45	16.37	17.78	18.14	15.51	16.96	15.88	17.29	17.65
	4H	16.64	18.01	17.04	18.36	18.74	16.15	17.52	16.55	17.87	18.24
	6H	17.11	18.38	17.52	18.75	19.14	16.61	17.88	17.02	18.24	18.64
	8H	17.26	18.47	17.68	18.86	19.25	16.75	17.96	17.18	18.35	18.75
	12H	17.35	18.51	17.78	18.89	19.32	16.83	17.99	17.26	18.38	18.80
4H	2H	14.81	16.18	15.21	16.52	16.90	14.45	15.82	14.85	16.17	16.55
	3H	16.78	17.93	17.19	18.33	18.73	16.38	17.52	16.79	17.92	18.32
	4H	17.56	18.59	17.99	19.01	19.44	17.14	18.17	17.57	18.58	19.02
	6H	18.16	19.06	18.61	19.50	19.96	17.72	18.63	18.18	19.07	19.52
	8H	18.34	19.19	18.81	19.63	20.10	17.91	18.75	18.37	19.20	19.66
	12H	18.48	19.24	18.96	19.71	20.18	18.02	18.78	18.51	19.26	19.73
8H	4H	17.83	18.68	18.29	19.12	19.59	17.46	18.30	17.92	18.75	19.21
	6H	18.55	19.25	19.04	19.74	20.21	18.17	18.87	18.66	19.36	19.83
	8H	18.81	19.44	19.32	19.94	20.43	18.41	19.05	18.92	19.55	20.04
	12H	19.01	19.56	19.51	20.05	20.62	18.59	19.15	19.10	19.64	20.20
12H	4H	17.86	18.62	18.34	19.09	19.56	17.49	18.25	17.97	18.73	19.20
	6H	18.59	19.22	19.10	19.73	20.22	18.22	18.86	18.73	19.36	19.85
	8H	18.91	19.46	19.41	19.95	20.52	18.53	19.09	19.04	19.58	20.14