

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: P930501

Luminaire Tested: DFN2DS-PN2F0-060DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930501
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-PN2F0-060DS935-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

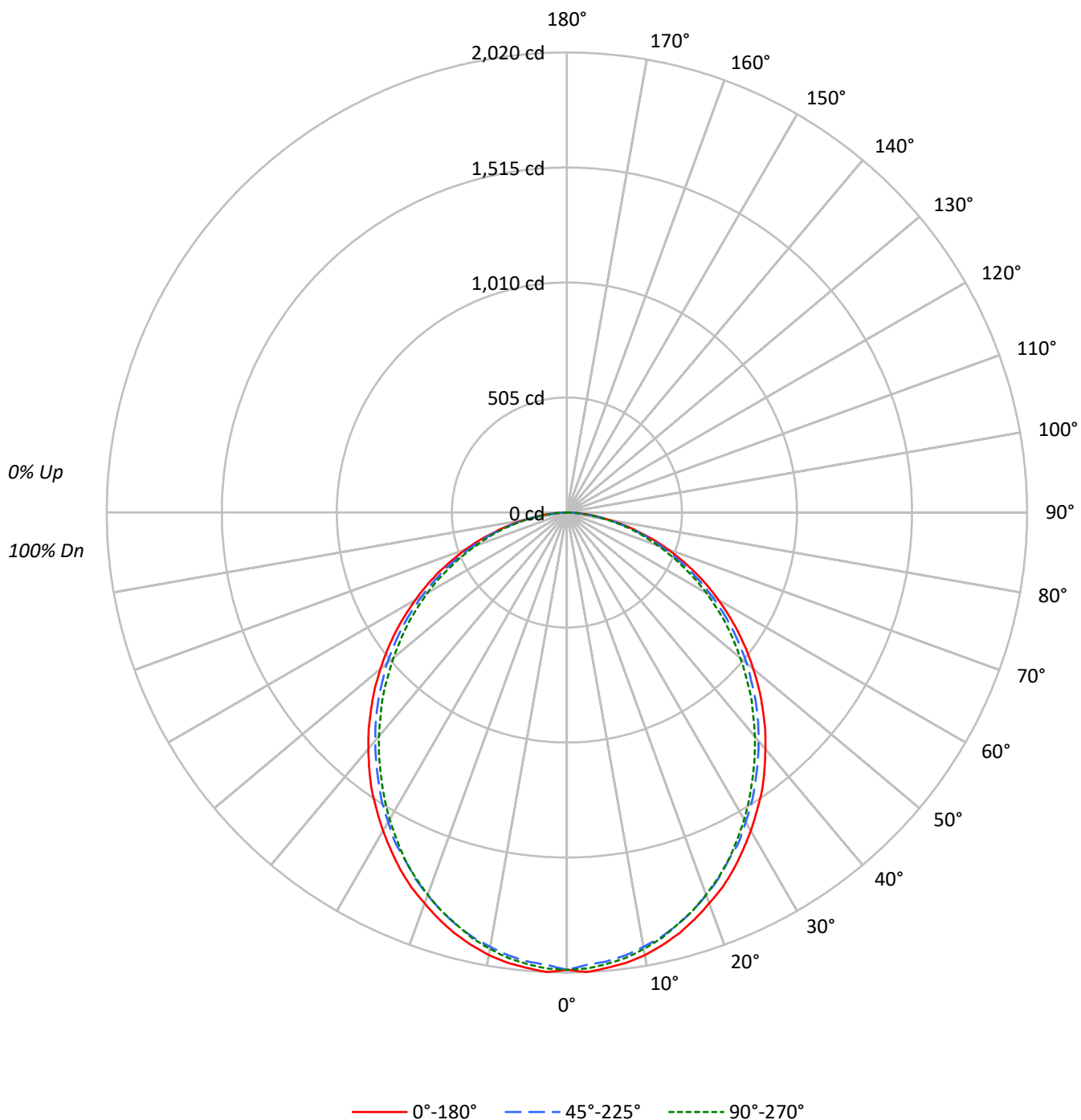
Lumens per Lamp: N/A
Luminaire Lumens: 5108.4 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

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

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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°	4349	4349	4349
5°	4365	4302	4328
10°	4340	4259	4280
15°	4286	4203	4199
20°	4209	4121	4117
25°	4134	4019	4019
30°	4037	3926	3892
35°	3946	3813	3757
40°	3832	3701	3630
45°	3720	3589	3501
50°	3597	3474	3350
55°	3471	3339	3215
60°	3328	3179	3061
65°	3176	3018	2879
70°	2983	2824	2690
75°	2713	2600	2537
80°	2410	2335	2215
85°	1963	1871	1680

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3720 cd/sqm

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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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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	16.39	18.00	16.75	18.31	18.63	15.95	17.56	16.31	17.87	18.18
	3H	18.14	19.59	18.52	19.92	20.28	17.65	19.10	18.03	19.43	19.79
	4H	18.79	20.15	19.18	20.50	20.88	18.29	19.66	18.69	20.01	20.38
	6H	19.26	20.52	19.67	20.89	21.28	18.75	20.02	19.16	20.39	20.78
	8H	19.40	20.61	19.82	21.00	21.40	18.90	20.11	19.32	20.50	20.89
	12H	19.49	20.65	19.92	21.03	21.46	18.98	20.14	19.41	20.52	20.95
4H	2H	16.95	18.32	17.35	18.67	19.04	16.60	17.97	17.00	18.31	18.69
	3H	18.93	20.07	19.33	20.47	20.87	18.52	19.66	18.93	20.06	20.46
	4H	19.70	20.74	20.13	21.15	21.59	19.28	20.31	19.71	20.73	21.16
	6H	20.30	21.20	20.75	21.64	22.10	19.87	20.77	20.32	21.21	21.67
	8H	20.49	21.33	20.95	21.78	22.24	20.05	20.90	20.51	21.34	21.80
	12H	20.62	21.38	21.10	21.86	22.32	20.17	20.93	20.65	21.40	21.87
8H	4H	19.97	20.82	20.44	21.26	21.73	19.60	20.45	20.06	20.89	21.36
	6H	20.69	21.39	21.18	21.88	22.36	20.31	21.01	20.80	21.50	21.97
	8H	20.95	21.58	21.46	22.09	22.57	20.56	21.19	21.07	21.69	22.18
	12H	21.15	21.71	21.66	22.20	22.76	20.74	21.29	21.24	21.78	22.34
12H	4H	20.00	20.76	20.48	21.24	21.71	19.64	20.40	20.12	20.87	21.34
	6H	20.73	21.37	21.24	21.87	22.36	20.37	21.00	20.88	21.50	21.99
	8H	21.05	21.61	21.56	22.10	22.66	20.67	21.23	21.18	21.72	22.28