

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: P930419

Luminaire Tested: DFN2DS-PN2F0-020DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930419
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-PN2F0-020DS835-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

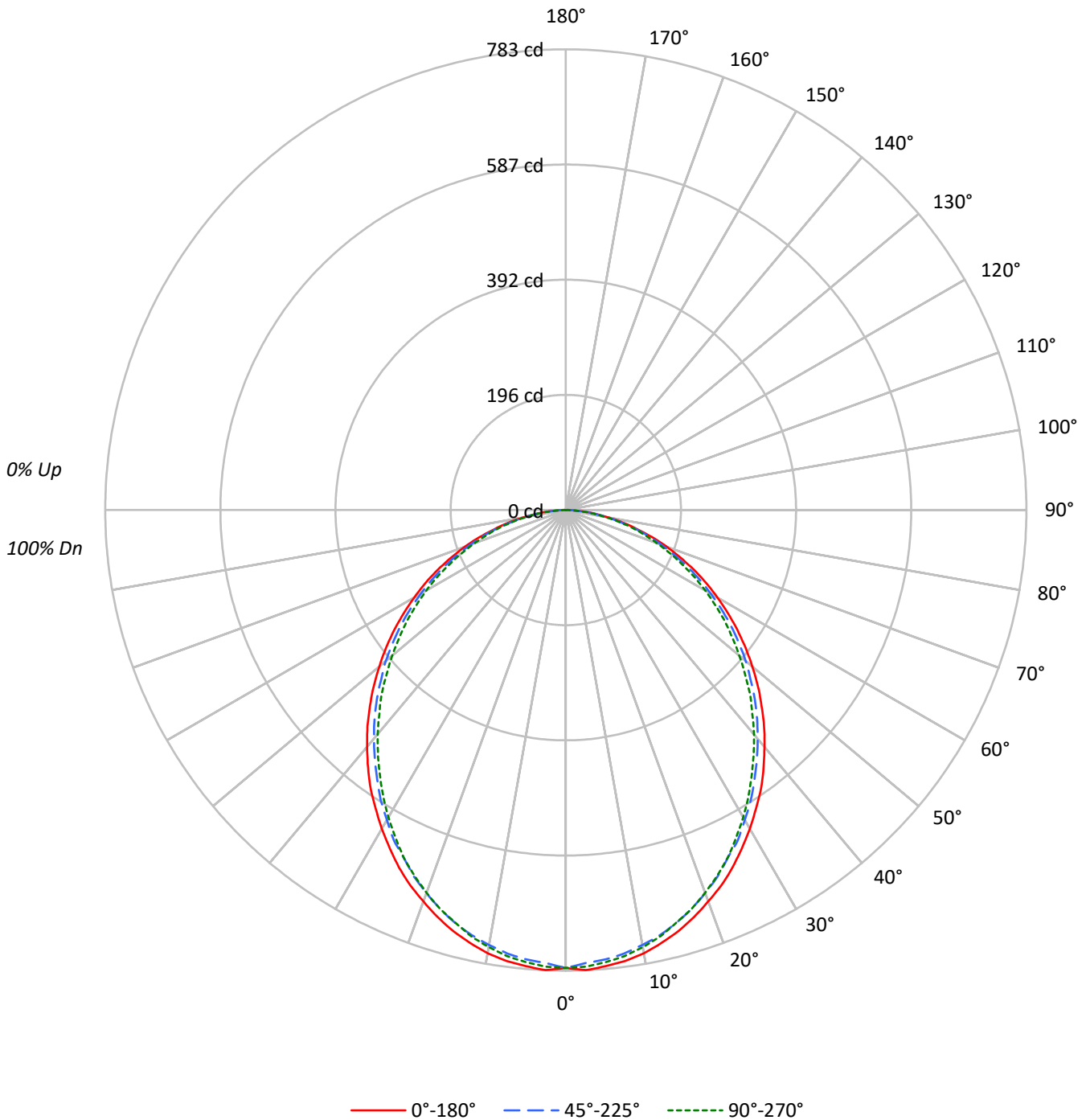
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1980.0 lumens
Efficiency: N/A
Efficacy: 102.6 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): 19.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930419
CATALOG NUMBER: DFN2DS-PN2F0-020DS835-FLL

Luminous Intensity Polar Plot





TEST NUMBER: P930419

CATALOG NUMBER: DFN2DS-PN2F0-020DS835-FLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1685	1685	1685
5°	1692	1668	1677
10°	1682	1651	1659
15°	1661	1629	1628
20°	1632	1597	1595
25°	1602	1558	1558
30°	1565	1522	1508
35°	1530	1478	1456
40°	1485	1434	1407
45°	1442	1391	1357
50°	1394	1346	1299
55°	1345	1294	1246
60°	1290	1232	1186
65°	1231	1170	1116
70°	1156	1094	1043
75°	1052	1008	983
80°	934	906	858
85°	760	726	651

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1442 cd/sqm



TEST NUMBER: P930419

CATALOG NUMBER: DFN2DS-PN2F0-020DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.7
10°-20°	206.1	10.4
20°-30°	302.9	15.3
30°-40°	351.8	17.8
40°-50°	351.3	17.7
50°-60°	306.3	15.5
60°-70°	226.5	11.4
70°-80°	128.1	6.5
80°-90°	33.8	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°	582.2	29.4
0°-40°	934.0	47.2
0°-60°	1591.6	80.4
0°-90°	1980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	778	775	767	773	772	74
15°	741	736	727	730	726	209
25°	670	664	652	653	652	309
35°	578	571	559	554	551	361
45°	471	466	454	446	443	363
55°	356	352	343	334	330	318
65°	240	236	228	222	218	238
75°	126	124	120	116	118	134
85°	31	30	29	27	26	36
90°	0	0	0	0	0	



TEST NUMBER: P930419

CATALOG NUMBER: DFN2DS-PN2F0-020DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	778.2	778.2	778.2	778.2	778.2
2.5°	782.7	779.0	770.7	778.2	776.8
5°	778.2	775.3	767.0	773.0	771.5
7.5°	773.0	768.5	760.3	766.3	764.8
10°	764.8	759.6	750.6	756.5	754.3
12.5°	753.5	749.1	740.1	743.8	742.3
15°	740.8	736.4	726.6	729.6	725.9
17.5°	725.1	720.7	710.9	714.6	710.9
20°	707.9	703.4	692.9	695.2	692.2
22.5°	690.7	684.0	674.2	674.2	672.7
25°	670.5	664.5	651.8	653.2	651.8
27.5°	648.0	642.8	633.1	630.9	627.1
30°	625.6	619.6	608.4	606.2	603.1
32.5°	601.6	597.2	585.2	580.7	577.7
35°	578.5	571.0	559.0	554.5	550.7
37.5°	552.3	545.5	533.5	528.3	524.5
40°	525.3	519.3	507.3	500.7	497.6
42.5°	499.1	493.1	481.2	473.7	469.2
45°	470.7	465.5	454.2	446.0	443.0
47.5°	443.0	437.8	425.8	417.5	413.1
50°	413.8	410.1	399.6	389.1	385.4
52.5°	385.4	380.1	370.4	362.2	357.0
55°	356.2	351.7	342.7	333.8	330.0
57.5°	327.0	323.3	313.5	304.6	301.5
60°	297.8	294.9	284.4	276.1	273.9
62.5°	269.4	264.1	256.7	249.2	246.2
65°	240.2	235.7	228.3	221.5	217.8
67.5°	210.3	206.5	199.8	194.6	191.6
70°	182.6	179.6	172.8	167.6	164.7
72.5°	154.2	151.2	147.4	142.2	140.0
75°	125.7	124.3	120.4	116.0	117.5
77.5°	100.3	97.3	95.7	93.5	91.3
80°	74.9	74.1	72.6	70.3	68.8
82.5°	50.9	50.9	50.2	47.2	47.2
85°	30.6	29.9	29.2	26.9	26.2
87.5°	13.5	12.0	10.5	8.3	7.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P930419

CATALOG NUMBER: DFN2DS-PN2F0-020DS835-FLL

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	13.10	14.71	13.46	15.02	15.34	12.65	14.26	13.02	14.58	14.89
	3H	14.85	16.30	15.22	16.63	16.99	14.36	15.81	14.73	16.14	16.50
	4H	15.49	16.86	15.89	17.21	17.59	15.00	16.37	15.40	16.72	17.09
	6H	15.96	17.23	16.37	17.60	17.99	15.46	16.73	15.87	17.09	17.48
	8H	16.11	17.32	16.53	17.71	18.10	15.60	16.81	16.03	17.20	17.60
	12H	16.20	17.36	16.63	17.74	18.17	15.68	16.84	16.11	17.23	17.65
4H	2H	13.66	15.03	14.06	15.37	15.75	13.30	14.67	13.70	15.02	15.40
	3H	15.63	16.78	16.04	17.18	17.58	15.23	16.37	15.64	16.77	17.17
	4H	16.41	17.44	16.84	17.86	18.29	15.99	17.02	16.42	17.43	17.87
	6H	17.01	17.91	17.46	18.35	18.81	16.57	17.48	17.03	17.92	18.37
	8H	17.20	18.04	17.66	18.48	18.95	16.76	17.60	17.22	18.05	18.51
	12H	17.33	18.09	17.81	18.56	19.03	16.87	17.63	17.35	18.11	18.58
8H	4H	16.68	17.53	17.14	17.97	18.44	16.31	17.15	16.77	17.60	18.06
	6H	17.40	18.10	17.89	18.59	19.06	17.01	17.72	17.51	18.21	18.68
	8H	17.66	18.29	18.17	18.79	19.28	17.26	17.89	17.77	18.40	18.89
	12H	17.86	18.41	18.36	18.90	19.47	17.44	18.00	17.95	18.49	19.05
12H	4H	16.71	17.47	17.19	17.94	18.41	16.34	17.10	16.82	17.58	18.05
	6H	17.44	18.07	17.95	18.58	19.07	17.07	17.70	17.58	18.21	18.70
	8H	17.76	18.31	18.26	18.80	19.37	17.38	17.94	17.88	18.43	18.99